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CLINICAL MEDICINE AND SURGERY

CMS

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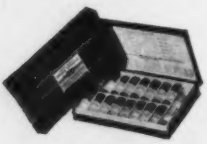

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CLINICAL MEDICINE AND SURGERY

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VOL. 42 JUNE, 1935 NO. 6

EDITORIAL

Avenzoar

HAD it not been for the Arabians, the whole important system of medical art, which had been built up by Hippocrates, Asclepiades, Dioscorides, Soranus of Ephesus, Galen and all the other worthies of Graeco-Roman times, would have been lost to the Western world during the "Dark Ages."

But the great Mohammedan physicians, Rhazes, Avicenna, Albucasis and their confreres, prominent among whom was Avenzoar, kept the torch of medicine alight.

When the Moslems invaded Spain, they took their learning with them, and, about 1094 A.D., Abu Merwan Abd al-Malik ibn Abu'l-Ala Zuhr was born, in Cordova, into a highly-esteemed and scholarly Arabian family, which had produced many great physicians. This lad later became, under the (fortunately) abbreviated name of Avenzoar, the most celebrated of the Moslem physicians of the Western Caliphate.

That Avenzoar had a mind of his own, is proved by the fact that he was one of the few men of his time who had the courage to disagree with Galen. He was the first to describe cancer of the stomach, pericarditis (including the dry form), mediastinal abscess, pharyngeal paralysis and otitis media. He also knew what we now call Pott's disease, and described its nervous complications.

By his description of the itch mite (*Sarcoptes scabei*) as the cause of scabies, he established his right to be called the first parasitologist after Alexander of Tralles, who wrote a treatise on intestinal worms and vermifuges, about the middle of the sixth century, A.D.

Avenzoar was also the first man recorded as having performed tracheotomy, though he does not always receive full credit for this, because he never did it on a human being, though he carried it out successfully on sheep.

His great work, *Al Teisir*, or "Rectification of Health," was put into permanent form, in Hebrew, in 1280, and is preserved to us in a Latin translation, published at Venice in 1490.

He died at Seville, Spain, in 1162, A.D., at an age which, in those days, made him a very old man.

It is well, sometimes, to consider the erudite Arabians, who preserved for us our professional heritage.

Assets and Liabilities

THERE has probably not been a time, in this generation at least, when so many people have been so keenly considering assets and liabilities as they are now. The matter has become vital to most of us, if not an obsession.

The curious thing about it is that, after the great shake-out of 1929, so many are still turning to the back pages of the newspapers to find out what they are "worth." If inflation of the currency is decided upon, stocks will go up and bonds down; if the dollar is "pegged" somewhere, the beam will tip the other way. In any case, how ridiculous it seems to have a thinking human being measure his value in terms of certain pieces of engraved paper of one sort or another, or even of a shiny metal whose *intrinsic* (strictly utilitarian) value is rather slight and impermanent.

Even earning power is a wholly fictitious yardstick for estimating a man's value to the community. Many of those who have contributed most largely to the world's advancement have lived and died financially poor: And if a man's services were worth $10,000 a year, five years ago, and he is still doing the same work, he is still just as valuable as he was then, though he is probably receiving considerably less money.

But one's value to the community, the nation and the race is by no means the only standard of his worth. We must consider his value, as a human being, to his family, his friends and to himself. Many men who can write a check in six figures (and have it honored!) are heavy liabilities in their family lives and of mighty little use to themselves, except as machines for grinding out more money.

When we all (or most of us) become fully grown-up individuals we will establish a civilized State, where values will be estimated in terms of things that *last*, rather than of things whose "worth" is purely fictitious and fluctuates according to artificial conditions which can readily be manipulated by a few selfish men.

The first step will be advancement to the point where we will ask, not "What does he *own?*", but "What can he *do?*" After that we will go on to the more penetrating inquiry, "What *is* he?"

Meantime, if our strictly financial liabilities are mounting toward the point where they will equal our assets, it might be well to look inside and strike a balance of our mental and spiritual resources. If these are sound and worthy, we can keep a high heart through the turmoil. If not, we will at least know where we stand and can set about decreasing our liabilities of unprofitable habits and ways of living and increasing our intangible — and therefore permanent — assets, without any more delay.

It is no good merely earning thousands of dollars, if you are not creative, mentally, emotionally and in action.—J. KRISHNAMURTI.

Specialists

WITH the vast increase in the scope and variety of human knowledge and in the multiplicity of mechanical devices, which has taken place in the past two or three generations, the necessity for specialists in many lines, in order to utilize that knowledge and those devices to the best advantage, has become apparent.

In medicine, the specialists are so important and so occupy the lime-light, that one would almost think that they make up the whole of the profession—if one did not know better.

But there is one field of medical endeavor in which the specialists are now being decried, to a considerable extent, by the men who occupy high places in various professional organizations; that is, the specialists in the manufacture of high-grade medicinal products.

If the wife or child of any physician were suffering from gangrenous appendicitis, would he call in his personal friend, the general practitioner on the next street, who, perhaps, performs six appendectomies in a year, or would he consult a specializing surgeon who performs the same operation six times a day? That question practically answers itself.

If, however, one of his dear ones were the victim of a heart lesion, would he go to his good friend, the druggist on the corner, for a bottle of home-made tincture of digitalis, or would he procure one of the potent and accurately standardized preparations of that drug, produced by a firm which, for years, had been specializing in the manufacture of a few remedies, and whose national reputation depends, like that of the surgeon, upon doing a few things superlatively well? Here the answer is by no means so certain—but it ought to be.

No one, today, expects the druggist to put up pills and compressed tablets extemporaneously. Why should he be expected to compound liquid remedies on the spur of the moment, if there are available highly refined, potent and specialized preparations of similar compounds?

At the present time, the compounding of

prescriptions is a very minor part of the business of the vast majority of druggists; but there will always be some work of this kind for them to do, because there will always be certain combinations of drugs which certain physicians will want to prescribe, but which have not been prepared in a specialistic manner.

Most druggists are honest, but, unfortunately, there are still too many who will substitute inferior drugs in a prescription, in order to increase their profit. While this is true, the wise physician will specify brands of drugs of known purity and power, will check-up on the druggist now and then (in order to guard him against falling into temptation), and will promptly and strictly remove his patronage from any who are guilty of the crime of substitution.

Practically all of the epochal advances in therapeutics during the past few decades have been made in the great, endowed research laboratories, and in similar laboratories maintained and operated, at their own expense, by high-class pharmaceutical manufacturers; certainly not by the corner drug stores.

There is a place—and an *important* place—for the general practitioner of medicine and for the local druggist; but the physician who fails to make use of the services of the specialist in surgery or in pharmacology, when these are available, does his patients and himself a grave injustice.

With all the clamor in favor of extemporaneous prescribing, which now seems to be popular, it will be well for the thoughtful physician to keep in mind the immense services which have been rendered to his profession by the reliable pharmaceutical manufacturers, and the highly specialistic services which they offer him in the treatment of surgical and non-surgical diseases, and to make as wide use as possible of the accurate, powerful and elegant remedies which are now available.

The best is none too good in the treatment of the sick, and those who have reputations to lose cannot afford to jeopardize them by questionable methods and practices or by failure to provide the best treatment which can be obtained at any particular time and place.

As a rule, people are pretty quick to recognize anything that's really good.—*The Little Journal for Physicians*, Dec., 1934.

It isn't enough to give an order. You must see that your orders are carried out.—LITTLE JOURNAL FOR PHYSICIANS.

Examine Your Conscience!

ONE of the reasons why a good many physicians are not so busy and prosperous as they would like to be, is that they are not sufficiently assiduous and honest with themselves in the frequent and regular examination of their consciences, as to whether they are doing their full duty toward their patients, their confreres and the public.

In the *Gaceta Medica de Mexico* for May, 1934, Dr. Alfonso Pruneda gives some suggestions as to a personal questionnaire, which he believes every physician should go through each night, answering all questions honestly in his own heart and, if these answers are unsatisfactory, so shaping his conduct during future days that he will not be ashamed of his company when he is alone.

Dr. Pruneda's questions are so pertinent and penetrating that we are reproducing a number of them here, with the suggestion that as many of our readers as are bold enough to do so try the experiment of asking and answering them, without equivocation or evasion, every night for a while, and see what the result will be. Here follow (in translation) the questions:

1.—Have I dedicated myself assiduously to my patients, to the end that I might understand their illnesses and choose the most suitable remedies for their cure?

2.—Have I made any unnecessary visits, for purely financial reasons, without having been called in or where the condition of the patient did not necessitate my presence?

3.—Have I been too hasty with any patient, making a superficial examination or prescribing in a routine manner, without giving serious thought to the definite value of my suggestions for the case in hand?

4.—Have I prescribed any remedies which might be harmful to any patient, by reason of my lack of knowledge of the exact properties and effects of such remedies?

5.—Have I put any patient's life in jeopardy, by experimenting upon him with drugs with whose powers and actions I was insufficiently familiar?

6.—Have I caused the death of any patient by prescribing contraindicated remedies, by lack of attention or by faulty judgment?

7.—Have I prescribed doubtful remedies when more certain ones were available, in a spirit of false pride, because the better ones had been suggested by someone else?

8.—When prompt-acting remedies were available, have I given those which act more slowly, in order that I might make more calls?

9.—Have I prescribed unnecessary drugs, in order to help out some pharmacist who had them in stock?

10.—In consultations, have I called in a personal friend, rather than the man best equipped to give sound advice in the case in hand?

11.—Have I made any unwarrantable charges?

12.—Have I made any false or exaggerated statements, in order to enable a patient to receive benefits of any kind, to which he was not entitled?

13.—Have I revealed any professional secrets, the discovery of which might be prejudicial to the reputation of anyone who has confided in me?

If this "daily (baker's) dozen" of spiritual exercises is persisted in regularly for a period of several weeks or months, there can be no doubt that it would produce marked changes in the conduct of most physicians; and there can be equally little doubt that these changes would be such as to render them more useful and valuable medical advisors, neighbors, friends and members of their communities.

This is the greatest error in the treatment of sickness: that there are physicians for the body and physicians for the soul. And yet the two are one and indivisible.—PLATO.

NEXT MONTH

Dr. Edward H. Ochsner, of Chicago, will sum up his long and extensive experience with the use of colloidal gold in the treatment of inoperable cancer.

Dr. George B. Lake will give his report on the recent meeting of the American College of Physicians.

Dr. Ellis Powell, of West Monroe, La., will discuss the practical, clinical importance of hyperinsulinism.

COMING SOON

"Meteorologic Conditions and Psychic Stress," by Emil T. Hoverson, M.A., M.D., Chicago, Ill.

"The Education of the Family Doctor," by Nathan S. Davis, III, A.B., M.D., F.A.C.P., Chicago, Ill.

Substitutes for Thought

THINKING seems to be extremely hard work for a good many people, and as most of us appear to have a lazy streak in us, we try to find some substitute for mental exercise which we can, by a process of rationalization, twist into a virtue.

With some, this substitute is golf, which is commendable because it encourages physical exercise. With others it is bridge, which has far less to recommend it. With still others it is "going places and doing things," which may prove to be an *addiction*, having after-effects as bad as or worse than those following alcoholic overindulgence.

Some kinds of reading are thought-stimulating and add to the size and power of our intellectual equipment or to our store of knowledge or both; but other kinds are, again, merely substitutes for thought and some are extremely bad substitutes.

We all need someone to compel us to live up to the best that is within us, but even that will do us little good if we refuse to be honest with ourselves and recognize the fact that many of our activities are carried on solely for the purpose of enabling us to escape from thinking. It is such a flight from unpleasing realities which has brought our nation to its present disastrous condition.

LEADING ARTICLES

Prevention of Exophthalmic Goiter*

By Israel Bram, M.D., Philadelphia

A DISCUSSION of the prophylaxis of exophthalmic goiter does not embrace a consideration of the prevention of simple goiter and of hyperthyroidism or toxic adenoma. We are discussing Graves' disease solely—that syndrome which is obviously engendered by: (1) a singular susceptibility (Graves' Constitution), as a predisposing cause; and (2) an exciting cause, serving as the torch that instigates the conflagration of the syndrome. This latter is usually a psychic trauma of one or another form, operating acutely or slowly, as the case may be.

Attempts at alleviation of predisposing factors and prevention of exciting causes are the ideal principles involved in the prevention of exophthalmic goiter. The ideal status could be reached only if a substantial simplification of human life were possible. Prophylaxis of exophthalmic goiter would be amply subserved were we in position to correct the many known *acquired* (environmental) factors indirectly causative of the syndrome. Presented with the opportunity of a free hand in the guidance of one born of parents with a history of Graves' disease, our first thought should be the planning of a mental and physical existence approaching as closely as possible the definition of the *simple life*. In view of the generally accepted fact that Graves' disease is one of the results of maladaptation of the individual to his environments, prophylaxis should depend largely upon an adaptive education of the individual, to begin at an early age.

Modifying Predisposition

The term *environment* is inescapable in the discussion of the prevention of Graves' disease. What is environment? Hall thus defines this term:

"The term includes, for the individual, all —everything, everywhere, in all time—save himself. But the vastness and the complexity and the grandeur of the cosmos is big beyond our ability even to contemplate it. And for each mortal there is a different universe. Each of us lives, in a sense, alone. No one can stand in another's shoes; no one can view the vastness from the viewpoint of another. Do you know the number of the inhabitants of the earth? For each there is a different environment, and for each an environment changing, not daily, but continuously. No one can feel for another the personal impingements of the universe. The only permanent thing in nature is change; yet, we would not have it otherwise. The monotony of an unchanging continuum would be appalling. Birth, life, death are but the dramatic features of this everlasting change—each potentially calamitous, each necessary, each unavoidable, each a predetermined constituent of the General Plan."

Rarely is an infant bred under ideal hygienic, dietetic and mental management. Nearly always there is a degree of error, from apparent trifles to gross carelessness, which causes us to wonder how the baby can survive the "fond" parents' care. Now, if one or both parents happen to be susceptible to, suffering with, or recovering from Graves' disease, we have, in the offspring, an instance in which hygienic, dietetic and mental care must approach the ideal. Such children should be regarded as pre-Graves' disease subjects—objects of prophylaxis from the beginning.

Parents often consider much flesh food as essential to growth and strength, and may begin administering maximum amounts of meats at the early age of 12 months. This is an error.

During school life, mental impressions from teachers, classmates, companions, relatives and even parents may diminish or increase susceptibility to the disease. Recreations, whether at home, out of doors or in assemblies, play their parts with a potentiality not sufficiently appreciated. The "movies" are a most powerful factor in molding young America.

High-pressure education comes in for its share of censure. The standardization of primary, high school and college education has led to emotional and physical casualties. In a large percentage of humanity, standardization in education is based upon wrong premises. The educational menu of an individual should conform with inherent needs, based upon a careful study of personality. The simple device of the Greek philosopher, who employed meditation and dialogue in imparting information and education to students, individualizing in the process, has given way, in modern civilization, to the feverish com-

*From the Bram Institute for the Treatment of Goiter and Other Diseases of the Ductless Glands.

petitive acquisition of a mountainous jumble of predigested facts, with little opportunity for their contemplation and assimilation and with little opportunity for originality. More plagiarism exists now than ever before in history. *Individualization*, not standardization, is the crying need of the day.

Females with a predisposition to Graves' disease must obtain relative or complete physical and mental repose during the menstrual period. In adults engaged in active pursuits this advice may be difficult to follow, but an understanding on the subject is usually reached without much ado.

It is during adult life that the greatest peril exists in persons predisposed to Graves' disease. Faulty dietary, social, sexual, vocational and other factors may intensify susceptibilty to the utmost. Dietary and related habits which tend toward an increased intake of toxins (and here the habit of constipation may be included), strain the neuro-endocrine mechanism intolerably. The habit of excessive meat eating must be discouraged. I am frequently told by these persons that they must take three or more cups of coffee daily. Many have been slaves to coffee and tea for years. A careful explanation of why an excess of tea and coffee is harmful usually results in satisfactory cooperation. The same may be stated of the various spices and condiments.

This type of individual is commonly sensitive to tobacco. The habit should be discouraged, lest all other efforts in our subjects' behalf may prove disappointing. It is my custom to have the patient promise faithfully, at the first visit, never to touch tobacco again. I do not permit them to say "I'll try" or "I'll do my best," much less do I permit a gradual weaning away from the weed. Anything less than "I will" implies effort with a minimum determination and is a poor psychologic procedure; "I will" is usually successful; the patient stops using tobacco, and that ends the habit in most cases.

Though a goodly percentage of predisposed individuals possess normal weight and a few are, to a degree, obese, many are undernourished. These subjects require an avoirdupois to correspond, at least, to their height and age. Indeed, a five- to ten-percent excess is highly desirable, representing an amount of reserve to be relied upon in case of emergency stress and strain. Though the appetite may be good, or excessive, these subjects are commonly poor eaters. Many have sharp hunger several times a day, but it is quickly satisfied, unsustained and capricious. Thus, in response to hunger, the intake of food is equivalent to one-half the customary meal, and this, repeated throughout the three meals a day, corresponds to a smaller daily intake than that of the average individual. Even an occasional morsel between meals does not yield the number of caloric units required by a person of similar age and stature. Correction should aim at accustoming the stomach to take at least a normal quantity of norishment daily, irrespective of discomfort. In the course of several weeks of forced feeding, the subject finds himself eating well, the weight reaches normal and soon above normal, and the slight excess—our goal—is attained.

The question of occupation is frequently a serious one. Aside from possible physical deterioration resulting from the pursuit of occupations associated with undue physical exertion, poisoning by chemicals, gases and other atmospheric impurities, there are occupations in which mental strain is a vital factor. Telephone operating, with its nerve racking incidents; school teaching, with its well-known potentialities for restless working hours and quite as restless hours off duty as a consequence; social work among the poor and suffering, with its depression—these pursuits have deteriorating influences upon body and mind. And if we take into account the numerous instances in which the occupation of an individual, such as manual labor, salesmanship, stenography, housekeeping* and diverse other pursuits, which are not in keeping with individual happiness and, far from being a pleasure, are a perpetual drudge, we can readily see how important is an investigation of the influence of the daily duties of the person under our study. Our task must entail an attempt at adjustment of the individual to the job, or the job to the individual, or both.

An ominous complaint by this class of individuals is persistently unrefreshing sleep. Such a person frequently arises in the morning fatigued and eager to remain in bed, irrespective of the hour and caring little for breakfast. Occurring daily and prolonged for months or years, such a status is a strong predisposing factor in the development of Graves' disease. This should be overcome by sane, persistent remedial measures calculated to induce healthful, refreshing sleep for eight or nine hours every night. Ideally, the person with a known predisposition to Graves' disease should devote an extra hour or two each night to sleep or relaxation, to favor autonomic and endocrine stability against possible disturbing influences through the waking hours.

Often we find that the sexual perturbation of puberty and adolescence and thyroid hyperplasia continue indefinitely into adult life. The sexual and emotional restlessness should

*The housewife often presents a problem entirely her own. Especially is this true in the presence of children and the absence of a servant. The manifold routine duties of kitchen work, looking after the children, house-cleaning and the like, with almost no outdoor air and social existence, deteriorate physical and mental health and serve as a potent predisposing factor in the production of Graves' disease.

be tempered by appropriate social, emotional and esthetic influences. The status of being affianced, and marriage and pregnancy, are subjects which cannot be overestimated in this respect. It is here, perhaps, more than elsewhere in the consideration of the prophylaxis of Graves' disease in the adult female, that common sense and vigilance should be exercised.

Lack of self-confidence requires supportive re-education, much as the lack of bone continuity in a fracture requires proper splinting. The splint needed in mental maladjustment is the psychotherapeutic influence of the understanding physician, who makes his patient's problems his own. In this task, medicaments may be required, not as a mainstay, but temporarily and as a supplement.

Fixed ideas, fear complexes, phobias and other mental states resembling compulsion neuroses, interfering with normal environmental contacts, require radical correction. In the matter of phobias, for example, treatment may consist of actual contact of the patient with the situation causative of the problem. In a young woman of 28, suffering from incipient exophthalmic goiter, it was found that the exciting cause was a somewhat sanguinary accident in her household, which served as a shock. A brief period of rest and the institution of medicinal and psychotherapeutic measures yielded recovery. But more than mere recovery was needed. It was felt that, in the interests of future safety, a degree of immunization against undue reaction in the presence of physical emergencies was vital. It happened that this discharged patient's sister was a trained nurse; after an interview with her it was decided that our former patient should be taken to a hospital for an hour or two each week, for the purpose of bringing her in contact with suffering and emergency cases for a period of several months or until such time as no further emotional reactions occurred from such contacts. The result was highly satisfactory.

Faulty mental habits are commonly observed in these persons. Many possess undue hypersensitiveness — they are "thin-skinned" and often pessimistic. Though high-colored in attitude when things are to their liking, trivial difficulties and obstacles may turn the tables so completely that moodiness, gloom, tears, and even hysteria prevail. To change this vacillating personality into one of stability, permeated by a healthy quality and quantity of optimism, though a difficult task, can, at least in part, be accomplished through the subtle influence of tactful friends or relatives, or under the guidance of a capable mentor. How to raise the threshold of emotional reaction is the vital problem. The substitution for a state of emotional alertness or *qui vive* by an attitude of *sang froid;* in other words, the assumption of the so-called "phlegmatic" temperament, is the "consummation devoutly to be wished." This is the essence of rationalization.

Prevention of Exciting Factors

If, in most persons with a susceptibility to Graves' disease, we can prevent the occurrence of an exciting factor, the chances are in favor of practical good health and even of unusual longevity. In the absence of an attack of the disease, these persons are known to exceed the span of three score and ten, and occasionally approach and even reach the century point.

Occupational, economic and social exciting causes are largely due to the trend of the times and to fortuitous individual circumstances or inherent inaptitudes. While these are amenable to modification, it is a difficult task, if attempted during adult life.

The psychosexual life of the individual may be replete with unwholesome events, serving as potentially instigating factors in the direction of Graves' disease. These, however, are largely amenable to prophylaxis. The physician must be in a position to "father" his charge, and to see that the crises of his or her existence are safely passed.

When improperly adjusted, the marriage relationship is a potent exciting cause of Graves' disease. A serious mutual prenuptial study of each of the contracting parties would prevent many divorces and many cases of Graves' syndrome. Neuman aptly states:

"Divorce is like a surgical operation. It may be quite necessary; but shall we therefore live as heedlessly as we please because, as a last resort, we can always call in the surgeon? Divorce may also be compared to bankruptcy. A man may be forced into bankruptcy as the only way out of his business troubles. But this is all the more reason why an honorable man, before entering upon a business, does all he can to prevent hurting either his creditors or himself . . . Successful marriage does not just happen. It is the fruit of a lifelong training in certain fundamental human excellences. Before we look to easy divorce as the chief way of meeting the difficulties of marriage, let us see whether we cannot build up sound ideals and sound practices in the art of living together."

Such critical situations engendering psychic traumata as earthquakes, lightning, storms, tidal waves and other natural phenomena are, of course, beyond human effort to control. However, war, conflagrations, explosions, elevator accidents, shipwrecks, massacres, automobile, airplane and train accidents and many other situations associated with danger to life and limb are largely man-made, hence are at least partially avoidable. Unfortunately these conditions are not in the power of doctors or psychologists materially to control and therefore are not tangibly amenable to their prophylactic efforts. It is reasonable to assume, however, that even if exciting causes cannot

be averted, if we succeed in reducing, in a given subject, the degree of *susceptibility* to the affection, the onset of Graves' disease may be prevented.

Such occasional causes of Graves' disease as local or general infections, autointoxications, pelvic neoplasms and the ingestion of iodine or of thyroid extract, are to be managed according to the indications.

The prophylaxis of Graves' disease must also include a consideration of the prevention of relapse after recovery from an actual attack of the malady. In those having recovered and enjoyed good health for a year or longer, we may safely assume that the primary predisposition to the disease has been materially minimized, if not altogether eliminated. This is especially true of patients whose thyroid gland has not been ablated by such measures as surgery or radiation. Such a person, taught how to adapt himself to live in accordance with an "anti-Graves' disease" existence, is of maximum service to himself and to society.

Mental Hygiene

If I were asked what is the greatest need in the prophylaxis of exophthalmic goiter, I would say, mental hygiene. The great need of the day is a widespread, concerted movement on the part of level-headed educators in the direction of INTELLIGENCE, writ large. Terhune's remarks are noteworthy in this connection:

"Never before in the history of the world has there been a greater need for individual mental hygiene than at present . . . Once again, in a time of national crisis, we who believe in mental hygiene have the opportunity to be of service to the nation, first, by applying its teachings to ourselves, and second, by doing all that we can to help others do likewise.

"Man's hope lies in the use of his intelligence; it is not sufficient merely to possess it, but it must be employed constantly and as freely as possible. The majority of people practically stop thinking after the age of twenty-five. There is truly an appalling waste of intelligence, for people find that it requires less effort to feel than to think. We must all cultivate intellectual pursuits, and we should continue some serious form of study all our lives, not only that we may learn more, but that we may cultivate an active, trained mind, for intelligence, like muscle, grows weak with disuse and cannot be employed in an emergency unless used daily."

Conclusions

1.—Graves' disease should become quite as preventable as is tuberculosis. We have reason to believe that, in nearly every case of Graves' disease, there was a time when preventive measures could have forestalled the occurrence of the syndrome.

2.—Ideal prophylaxis of Graves' disease should begin in infancy and extend well into adult life, the object being an attempt at perfection in hygienic, dietetic and mental training.

3.—During childhood, such influences as school and home life, companions, recreation and other factors capable of molding the physical and mental self must be taken into account.

4.—During the restlessness of puberty and adolescence, the emotionalism, instability of reasoning processes and the physiologic thyrogonadal hyperplasia, all make for an accentuation of neuro-endocrine instability and should receive thoughtful, scrupulous guidance.

5.—Predisposition to Graves' disease may not always be amenable to prophylaxis, nor are exciting causes of the disease always avoidable. In the absence of the ideal (the eradication of predisposing and exciting causes), if through intelligence and rationalization we can reduce susceptibility, on the one hand, or modify the chances of the occurrence of exciting factors on the other, the prophylaxis of Graves' disease will have earned an important place in preventive medicine.

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PREPARING FOR THE GREAT ADVENTURE

If I can live in simple comfort and owe no man anything, sharing intimately with loved ones life's varied experiences; if I can bring a touch of healing and a clearer outlook into the trials and problems of those with whom I mingle; if I can humbly undertake public service when the public calls me, caring neither too much nor too little for popular approval; if I can give spiritual values always the first place as did Jesus of Nazareth, and gladly sink from sight like a bit of leaven that the coming of His kingdom may be hastened, then will this experiment of living yield, in full measure, the true wealth of contentment, and when the door opens on another stage of existence I shall be ready for the great adventure.—ALFRED OSBORNE.

Sex Questions Answered*

Part II

By G. P. Lawrence, M.E., M.D., Westerville, Ohio

Time for Marriage
Economics of Marriage

9.—Should marriage between two fairly well educated people, say college classmates, be postponed for financial reasons?

NO one can answer this question with yes or no. The solution depends upon the two individuals and their financial, employment and housing situations, and therefore must be worked out by each couple for themselves. Occasionally, financial circumstances are such that marriage must be postponed for a while, but in general, when two full-grown adults have made "the great discovery" and *know* that they love one another, they should be married within a few months.

No one should marry without an adequate income. Each person's idea of an adequate income is different. Marriage should not be postponed until the couple is financially able "to keep up with the Joneses," neither is it best for a newly-married couple to live with either set of parents. This is a bad practice and the utmost efforts should be bent to arrange a balanced budget, even if it is necessary to live in only one furnished room.

But there are exceptions to all rules. Many couples are marrying now, and both of them work. Sometimes this is a highly satisfactory arrangement; at other times very unsatisfactory, according to both of their mental attitudes toward a wife's working, instead of being supported by her husband. This is a survival in view-point of the olden days, when a wife was her husband's property and labored in the home according to his bidding. The modern idea of an equal partnership is much easier to reconcile with the wife's working. Such a program is often perfectly possible immediately upon graduation and, as a temporary expedient for two or three years, is a splendid way to secure the necessary capital with which to embark upon raising a family.

While two people cannot live as cheaply as one, their joint expenses can be made less, in many cases, than if they were living separately. Tastes and recreations have much to do with this. It costs just as much for two people to go to the movies after they are married as before, but if, upon marriage, they omit the movies and other expensive amusements almost entirely, and get their joy in each other's company and in working and playing together, *doing things* themselves instead of *being amused* by hired assassins, they will be better off, not only financially, but mentally, spiritually and physically.

The large "musca in the unguentum" is the question of children. Such a program may be laid out and embarked upon with the best of faith, but, if an unpremeditated pregnancy occurs, the whole plan is wrecked. Therefore, a final solution of this problem hinges upon the question of contraception, which is another matter and is discussed in answers 39 to 41. With contraception properly used, any energetic young couple should be able to lay out their plans and marry very shortly after graduation, and it would be very much the best thing for them to do. Without contraception, we might as well face the fact that human experience has shown that the average couple has a baby from nine to fifteen months after the wedding day.

Choosing a Mate

10.—Do you think that a girl who is a college graduate should marry a man who has never gone to college? Could such a marriage turn out happily?

Many such marriages have turned out very happily, and many have been miserable, grisly failures. It all depends upon the attributes of the two individuals. In these days, when every ambitious young man and woman is striving for a college education, we are liable to pay more attention to the label we find on the package than we do to its contents.

It is presumed that a college education confers upon the recipient a certain mental, spiritual and moral stature, with an ability to adapt himself to his environment which is greater than he would have attained in the same length of time without the college training. Yet many a person goes through college and receives a degree without the professors having made the slightest impression upon his real nature. Obviously, the result produced depends upon, first, the raw material—what kind of a man or a woman did we have in the beginning? How was he or she trained, previously to entering college? Second, it depends upon the college—the type of training and opportunities offered and the personnel offering them. Third, it varies with the application of the student. Fourth, it depends upon the atmosphere, the extra-curricular activities and the degree of participation of the student in such activities.

Some, who have never been inside a college building are, by a happy combination of good breeding and good reading, truly cultured and tremendously fine people, of great

*This article is being published in four parts.

intellectual stature—people who could make a "go" of marriage with almost anyone. In contrast, many college graduates (even some Ph.Ds) are consummate asses, for college is no exception to the good old rule that "you can't make a silk purse out of a sow's ear."

Every intimate friendship should be based upon careful study and testing of the characteristics of the participants, in order to determine compatibility, and no person should be considered even as a candidate for close friendship until he or she has passed such tests and demonstrated such eligibility. The problem is, not to find someone with the same label you wear, but to choose someone whose mind and spirit are in tune with you, and who is reasonably healthy. Presumably, attending college gives one better opportunities to meet congenial people and to acquire ability and judgment in choosing and studying one's friends. This should be a large part of the benefit gained from a college course.

A marriage is happy when two people love each other and have interests in common, meet their successive problems cooperatively, respect each other's personalities and rights, and give and take together. When two people are not attuned in this way, they cannot be happy. This is not determined by the process through which a person has been put, but by the present nature of the product. Marry an individual, not a diploma, or a suit of clothes, or even a family tree. (See answers 11 and 14.)

11.—What happens to the fellow who chases a new girl every week? Can he be happily married?

He certainly may, but it all depends upon his attitude and methods. It is most advisable, throughout at least three-fourths of a college career, to have many friends and quite a number of intimates. Not only is there "safety in numbers," but the average freshman is certainly in need of education in human nature. An intimate acquaintanceship with the mental and spiritual attributes of many different girls is an important part of any man's education. The young fellow who wins the friendship of many young women is going to be a better man and husband when he finally selects from the multitude the one who best satisfies his inmost longings. All this equally applies to the opposite sex, and no woman should feel flattered that her husband married her merely because she happened to be the first girl he met when he went to college.

On the other hand, the young rounder who chases one girl after another, merely for the physical thrills he can get out of it, is headed straight for perdition, and when he marries, is only assuring himself of a little more localized and specialized suffering for himself and his wife, than he would have had if he had remained single.

12.—I know a girl who is preparing to teach school. Now she wishes to marry a man whom she knows will not be able to have children, for physical reasons. Do you think this should be done?

I do not! Under very exceptional circumstances a marriage is happy without children. Most necessarily childless couples are miserable until they overcome their handicap or adopt children. If this young woman, after mature study and consultation with older and more experienced folks, and absolutely frank discussion with the man in the case, still feels that he is so eminently superior to anyone else she knows, or has any prospects of meeting, that life with him will offer more rewards and joys than her best alternative possibility, plus two or three children, and goes ahead and marries him, she will probably be able to keep up external appearances and appear to be perfectly happy. However, I am cynical enough to believe that, in 75 percent of such cases, we will ultimately read her name in the list of Reno's latest arrivals. In another 15 percent of cases they will adopt children and live happily ever after, amidst the general approval of all their friends and acquaintances; while in the last 10 percent of cases, after some few years, the stork will pay one of his visits, and those "in the know" will wonder and wag their heads, or tongues, according to sex.

Jealousy

13.—If jealousy is present, should the couple try to overcome it; or does it indicate incompatibility and should they stop going together?

Jealousy is a symptom of imperfection and, like all symptoms, should be carefully studied to determine the conditions which cause it. It may indicate incompatibility, but like headache or pain of the right inguinal region, its cause may be protean. Jealousy is a mental reaction to a threat of loss or dispossession. We feel jealous because we are *afraid* the object of our attention is going to be taken away from us. The one who is *sure* of his or her posessions does not feel jealous.

Comparatively new friends often flame with jealousy. Many old friendships, which should be on a firm foundation, are disrupted by jealousy; and many married couples, who should have had their relationships indissolubly cemented many years ago, are continually tormented by jealousy.

To answer the question; assuredly any newly-acquainted couple should try to overcome jealousy by becoming better acquainted. By studying one another's tastes and characteristics they can determine whether they are or are not compatible. The mere presence of jealousy in an acquaintance does not indicate

incompatibility, but the persistence of jealousy after long friendship is strongly suggestive of incompatibility or lack of character or of plain, common horse sense. People who are really incompatible should face the facts, long before marriage, and part as friends. If they do otherwise, it serves them right to be tormented by jealousy.

Love as an Art
Tests of True Love

14.—Please enlarge on the subject, "Love as an Art," including the technic of sex relations.

Love is an art, but marriage is a business—a *serious* business. First, read and ponder the definitions of art in the dictionary. The art of the architect transforms a shack into an attractive house, to which the interior decorator adds further charm. Music, painting and sculpture make it even more beautiful; but it takes a skilled and loving wife and mother to make a *home* of it. Why expect nature, miraculously and instantaneously, to give us perfection in love, when long and arduous years of study and practice are required to master any of the less important arts?

One must first learn something of various materials, their capabilities and the methods of combining them. Then years of practice gives skill to create a "work of art."

Honesty, good manners and sincerity are the fundamental materials of character. Exercising them in years of practice in meeting people and winning them as friends, finally develops a skill sufficient to qualify one to love adequately.

Not everyone who paints pictures is qualified for the Royal Academy, and those who are so qualified must practice continually or lose their skill. Not everyone who has a glib familiarity with modern movies is an accomplished lover, for, alas, it is easy for an actor to enact the physical pawings-over of courtship, but well-nigh impossible to portray the tedious construction of the mental and spiritual ties with which an enduring love is bound together. The enthusiastic artist is continually entertaining others with his talent. Eliminate your own flaws, be honest and sincere, trying to win the friendship of all you meet, and the practice will qualify you for love.

As to the "technic of sex relations," it would take much detailed discussion to even circumnavigate the bounds of the subject. Practicing intercourse, or even studying it much, before marriage, is liable to magnify its importance in the student's mind and obscure the much more fundamental, mental and spiritual factors in love, and therefore to mislead one to diagnose love on the basis of physical attraction only. A marriage so based is often followed by a rude awakening to "incompatibility," and then divorce.

The less unmarried people think about the technic of sex relations, the better. Physicians should be informed, *in detail*, on such matters, and young couples should consult them for advice *shortly before marriage*. If the physician does not care to undertake personal instruction, he may lend or prescribe suitable books[3]. It is planned to give extended consideration to this phase of the subject in a subsequent article. (See answers 10, 11 and 29.)

15.—How is one to know when one is truly in love? Is there any test for "true love"?

If one *builds* love, it is possible to know when one is truly in love. If a person carelessly allows himself, or herself, to be immersed in a flood of sex excitement, without first analyzing the exciting cause, it is nearly impossible to distinguish the true from the false. If a couple first becomes thoroughly acquainted with each other's characters, beliefs, tastes and interests, before entertaining sentimentality or experimenting with physical thrills, they can calmly decide whether they are compatible or not. If compatible and "The Big Thrill" comes, they can be sure it is "true love." They may need a physician's help later, with the physical relationships, but that is another story. (See answers 28 to 36.)

Erotism, Masturbation, Pollutions

16.—What is the difference between masturbation and onanism?

The word masturbation comes from two Latin roots, *manus*, meaning "hand," and *stuprare*, meaning "to rape." The Illustrated Medical Dictionary, by Dorland, defines it as "self-pollution: the causing of an orgasm by the hand or by any mechanical friction of the genitals," as by the thighs, against a table, etc. It is very common (equally so in both sexes) and, at some age, almost universal. It may, under circumstances of accumulated tension, unrelievable in a normal way, be a decidedly beneficial outlet.

"Onanism" is so called because of the deeds of a certain Bible character who "spilled it upon the ground," as narrated in Genesis 38. This obviously is a description of what we now call coitus interruptus. The first is a solitary vice, the other a frustration or cutting short of normal relationships.

17.—I have heard the statement that more satisfaction was obtained through masturbation than through sexual intercourse. Is this true?

Occasionally it is, but such a situation is not normal. Only those who have long indulged, or who are actually perverted in some way, find masturbation the more satisfying. Normal people seldom have such difficulty. Women with a hooded clitoris often do not

3.—Van de Velde: "Ideal Marriage."
Butterfield, O. M.: "Marriage: Some Practical Suggestions."

reach an orgasm in intercourse, but can produce one by masturbating. They should be circumcised and will then become normal, providing their husbands know how to play the game.

18.—Does the seminal fluid contribute anything to the blood that adds to the physical vigor? Is it as important as social hygiene workers usually represent it?

The seminal fluid is a highly complex, nitrogenous substance. It requires considerable energy and blood to build it. Its excessive discharge produces a very definite drain upon the system. Its retention conserves this energy. Hence the custom, in training for special athletic events, of avoiding sexual indulgence.

The seminal fluid seems to contribute to the wife a very beneficial element, which some authorities have identified as adrenalin. The evidence gained from intelligent married women, who have experimented with various methods of contraception, proves very definitely this beneficial effect of the semen, and the lack of it where contraceptive methods, such as the condom, prevent contact of the semen with the vaginal mucosa.

Similar research among men seems to indicate that there is something in the feminine secretions which is equally beneficial to men who are patient and stay long enough to absorb it. All of which brings us back to the point that there is an art in the technic of sex relations.

Perversions

19.—Please explain what is meant by "sexual pervert." Are there several kinds?

The American Medical Dictionary, by Dorland, defines a pervert as a person of abnormal sexual instincts. There are many kinds, and the medical literature is much more voluminous upon them than upon normal physiology. Many books have been written by many authors. Havelock Ellis, in his seven-volume treatise, "Studies in the Psychology of Sex" (F. A. Davis Company), has covered the subject completely. It is best not to expose the young, non-medical reader to all the gruesome details of such an exhaustive treatise. The physician should read and digest it for him and be prepared to answer his patient's questions, only as fully as seems best.

Kissing, "Spooning" and "Petting"

20.—What is taken into consideration in "petting"? I am not clear as to what is involved.

"Petting" includes all forms of physical contacts used, by a participating couple, to produce sexual excitement without going as far as actual intercourse. It includes a myriad form of caressing, kissing and mutual masturbation. Strictly speaking, "petting" was designed by the Creator to serve as an introduction to intercourse. It is, therefore, out of place between casual acquaintances or even friends who are not seriously considering marriage. A reasonable indulgence for a week or two, preferably just prior to marriage, is advisable as preliminary training and practice before actual intercourse is attempted.

21.—Does the girl who refuses to "neck" have a better or a poorer chance to marry well than the girl who doesn't?

Human nature always seeks adventure. Therefore, the girl who "necks," like the brilliant electric-light, will always have a group of male moths fluttering around. Such cheap popularity is undoubtedly thrilling, and much experience can be gained thereby. As to the real value of such experience, I have grave doubts.

Furthermore, human nature still prefers new to second-hand goods. Therefore, the average man, when choosing a wife, is not greatly interested in one that has been "pawed over" by every man in town. If such a poor, misguided female can keep her deep, dark past a secret, she may have as good a chance as her less experienced sister. In fact, she may gain a few crumbs from her extensive experience which will make her more alluring to the opposite sex.

As to her chances for marrying well, if she uses, in solving the problem of choosing a husband, the same type of judgment she used in settling the question of "necking," it is doubtful whether her experience will be of much help.

"The fruit on the highest branches is always the sweetest." The least familiar objects within our ken arouse the greatest interest and often seem most desirable. Conversely, "familiarity breeds contempt." So it is that the girl who is not easily attainable will be most striven for. If she is intelligent and friendly, an interesting conversationalist and a good listener, radiantly healthy (not necessarily pretty) and a good companion, she will always have plenty of dates. Then, if she takes the trouble to discuss matters of importance to life and living, details of tastes and ideals, instead of studying movies and practicing the various modes of "necking" there exemplified, she will easily be able to discard the triflers and the worthless ones and sort out from the remainder the good pals with whom to attend parties and the extra-congenial and compatible souls with whom to be especially friendly. Thus she will have a much better chance to marry well than the "necker," who will probably be rushed off her feet by the first brainless pup who has mastered erotic technic. (See answers 9 to 15.)

(To be Continued)

Intensive Physical Training

By Geo. A. Skinner, M.D., Omaha, Neb.
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FOR some years there has been a general speed mania, with ever increasing demands to do things faster. While the demand for speed has been reduced in some phases of life, the desire to accomplish results instantly still lingers. Greater and greater speeds are demanded on the road, and this has resulted in constantly increasing automobile injuries and deaths.

Unfortunately the same pressure for speed has invaded all branches of life, industrial and social, until most of us constantly plead lack of time. So it has come about that the same plea is heard regarding the necessary exercise to keep the body in fit physical condition. The days are so full of activities, mostly mental, sedentary and gastronomic, that there is no time left for the needed muscular exertion required to keep the human machine in good working condition.

Most men at least realize that a certain physical activity is essential to their well-being, and most of us mean to keep up exercise. It is, however, the easiest of our activities to displace, so it is crowded out and neglected. In this the medical profession is no exception. After a time we begin to note the lack of exercise and determine to correct our habits. So on one day a week, or possibly once a month, we will indulge in an afternoon of vigorous exercise, to make up for that which has been omitted. It is as a result of such attempts to "catch up" physically that much damage is constantly done, particularly so during vacation time. We live in such an intensive way that "intensive physical training" has also been tried, and it is to present some observations on the results of such training that this discussion is directed.

The human body has an elastic limit that is truly wonderful, and the amount of punishment it will take, and still function satisfactorily, is much beyond that of any mechanical device of man. A man may work continuously for several days and nights, and after sleeping about twenty-four hours, appears to be perfectly normal again. He may habitually get along with five or six hours' sleep or he may sleep ten hours out of every twenty-four. He may starve himself until his body weight is much below average or he may eat until he is greatly overloaded with a burden of fat, and still remain approximately in normal health. He works at polar and tropical temperatures, at the reduced pressure of the stratosphere and at the increased pressure of the caisson or diving suit, and often without appreciable damage. To all such extremes the body can adjust itself, more especially when young, and while it is possible to damage youth by overexertion, it is relatively rare. But this enormous elasticity is gradually lost with increasing years, and as middle life is approached this condition changes quite rapidly. Varying with their heredity, men begin to lose, at varying speeds and under varying conditions of living, this invaluable elasticity of youth. While its loss goes in all of us, there is little doubt that it can be much retarded by proper habits, such as exercise, diet, etc.

It is much the same in all phases of life. We receive about what we are willing to pay for. If a man regards his health as his greatest asset and treats it accordingly, he will often be able to postpone his physical ageing many years. If his health is regarded as secondary — something that should take care of itself, regardless of abuses—and when it does not, he assumes the attitude "It's up to the doctor to fix me up," his chances for breaking in early mid-life are good.

The Heart Needs Time

There are certain physiologic processes that take time and can no more be hurried than we can "hustle the East." Among such processes is muscle building, and by no method known at present can this be greatly accelerated. We have many times tried to do it, and whenever there is a national crisis it is tried again, always with disaster to a fair percentage of the men who undertake such intensive training.

This form of training may work fairly well in mental fields, for when the brain is overworked the man will simply go to sleep, and the brain refuses to function. But when intensive training is tried in a physical way there is one restraining factor that is not usually considered, and which is at the center of the physical system. While the muscles of the body may be made lame and sore by overexertion and a man suffer much physical pain therefrom, these will rapidly recover. But the great muscle at the center of the circulatory system, the heart, cannot be safely overstrained, no matter how great our hurry may be to develop physically. If this organ must deliver a greatly increased load of blood necessary to support greatly increased physical exertions, it must have time to readjust itself to the new conditions. It is here that intensive training fails, and it is usually at this point that great damage always has been done when such training has been attempted.

Observations on the intensive training of large numbers of men have resulted in some rather startling conclusions. Often serious physical damage has been done, but such results were not at the time attributed to this training. Later follow-up indicates that there is little doubt that the damage came when the effort was made to train the body at a speed beyond the capacity of the heart muscle to compensate for the increased load. Fortunately some of the damage was not irreparable, but much of it was.

When a large number of youths in the twenties are put into rapid and intensive physical training, a fair percentage of them will respond to the hard work without damage. Those of robust build, who have been more or less in the open and whose muscles have been used with fair regularity, will nearly always respond favorably, even though with considerable bodily discomfort. Another group, less robust, will often meet the first demands for a time, then fall out, and after a period of rest will be able to resume. A third group will soon show distress and will be sent to the hospital, with a very rapid heart action, shortness of breath, dizziness and nervous instability. The so-called neuro-circulatory asthenia, or irritable heart, is undoubtedly one of the results manifested by those who have been unable to meet the sudden physical demands of intensive training, and have broken in the attempt. This result is not often noted in small groups, as the individual will usually stop training before the damage has been done, and does not resume until he has recovered, but when a national emergency threatens and great numbers are rapidly trained, it becomes a serious problem and one well worthy of consideration by the medical profession.

The greatest damage comes, however, in the older age groups. Especially is it noted among professional and business men of mid-life, men whose habits have been largely sedentary, who have lived well and accumulated some excess weight. Most of these men have long been out of training, and while they may play eighteen holes of golf once a week, and on vacations take a hunting or fishing trip, really they use their muscles very little. Walking is almost unknown to them, as the car is always at hand and the press of time forbids walking. They have reached the age when the loss of elasticity is more or less present, and if they would, they cannot respond so quickly to physical upbuilding as they could have twenty years previously. Given a condition where they are faced with the need of physical overexertion suddenly, an unduly large percentage of them will fall by the way. If, however, reasonable methods and time are used, these same men can become again highly efficient physically, unless they have already developed some organic circulatory lesion.

I have trained such groups of professional men, so that these observations are based on practical results obtained. It is exceedingly simple and requires mostly patience in order to succeed. Such training is based upon observations already made, that the results of the training will depend entirely upon the ability of the heart to respond to the increased load thrown upon it. In most cases this will be satisfactory, if the timing is proper.

In one experiment, a large group of doctors, mostly in mid-life and who were very actively engaged in the practice of medicine, formed the officer personnel of a Base Hospital, soon to be called into oversea service during the World War. No one knew just how much would be required of medical men in the active work at the front, but it was safe to assume that it would be hard physical work, often prolonged without periods of rest, and on that assumption, the training was based. The men were all informed of the probable physical stresses, and advised to start immediately to prepare for them. At first no regular group training was undertaken, but each man fitted himself as he pleased until a specified date, when he would be expected to join the command prepared to hike at least five miles. These hikes were steadily increased, and then loads were gradually added. Such training gave time for the muscles to become seasoned, the feet hardened to walking and the heart to readjust to the increasing demands. Before the command sailed for France, every man and officer was trained to march twenty miles or more per day and no damage, physically, to any of them, could be detected on careful physical examination. Some of these doctors had not walked a consecutive mile for months, up to the time of the training. Many were in the late forties or early fifties, yet they responded favorably. Such results are possible in the great majority of men with undamaged circulation, provided time enough is taken.

Perilous Vacations

In ordinary peace-time occupations, the greatest damage I have observed has been among men of this same middle-age group, who have always loved the open, and look forward eagerly to their annual vacation and its hunting or fishing trips. Wonderful plans are made for their outings, but one important thing is usually overlooked. No physical preparation is made for the strenuous hiking, load carrying, horseback riding, boat rowing, canoe paddling, etc., that are usually a part of these trips. This lack of preparation throws a severe strain on the heart early in the vacation period, and it may or may not

be able to respond to the demands. Certainly a large number of men return from such trips in much worse condition than when they left home, and some completely break. Annually there is a monotonous repetition of such accidents, and fatal results are much more frequent than is generally realized. Several such cases have come to my attention annually for a number of years, and certainly my experience is not unique.

I believe that the medical profession can render a real service to men of all ages, but particularly to those in the middle-age group, by instructing them in the great need for physical preparation for their annual vacations. Better still, by insisting that their patients keep physically fit all the time. But the profession should go further, and show them by example rather than by precept.

In a rather long life I have found that nothing pays better dividends than the attempt to keep physically fit. This may become a "fad" and a very useful one, and really does not require much time if it is kept up consistently. Many times we might walk instead of riding. Many times we can do odd tasks that require physical effort, instead of hiring someone to do them for us. Muscles must be regularly used if we would be prepared to meet unexpected physical strains, and only by a fairly consistent daily use of our muscular systems can we keep really physically fit and eliminate any need of attempts at "intensive training."

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The Care and Feeding of the Premature Infant*

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HISTORY is replete with dark chapters without number, where the civilization of the particular period practiced deliberate and wanton destruction of its weak, feeble and especially its premature infants. The higher the degree of a civilization, the greater are the efforts to safeguard its feeble and immaturely born. The lower and the more material a people, the less energy do they employ towards conserving the lives of its feeble, helpless and less fortunate members.

This is noteworthy in view of the fact that some of the apparently worthless premature infants grew up to become civilization's great landmarks. Thus it happened that an insignificant premature afterwards came to be Sir Isaac Newton, who gave us the law of gravitation and who lived from 1642 to 1727 (85 years). Georges Cuvier, who lived from 1769 to 1832 (63 years), became the father of comparative anatomy; Lamartine, the great French lyric poet, lived from 1790 to 1869 (79 years); and Jean Jacques Rousseau from 1712 to 1778 (66 years). These are only a few of the great prematures. How many thousands may have been born but succumbed early in life for the want of proper care and were lost to mankind, will never be known. The world may have been thus deprived of many poets, artists, scientists and benefactors of mankind.

As physicains, it is our duty to do all in our power to help in saving and prolonging the life of the humblest baby, full-term or prematurely born. Life must be regarded as sacred by all.

*Read before the East Flatbush Med. Society, Dec. 10, 1934.

The causative factors of prematurity belong to the domain of the internist and to the obstetrician and will, therefore, not be touched upon here. We are concerned with the premature infant when it comes to be born. Times were when there was a great controversy between the obstetrician and pediatrician for priority in the care of the premature. That period in the history of medicine will always be regarded with credit, for the sincerity of the medical men of the times. Both the obstetrician and the pediatrician regarded with great concern and deep interest the first days of the life of the premature infants, and quite naturally each of them felt best qualified to supervise them. The obstetrician must have reasoned that, inasmuch as the infant was born before completing its bodily development within the organism of the mother, it should still be regarded as part of the maternal economy, hence it would logically follow that he who is charged with the responsibility of the care of the mother should also include the infant. The pediatrician argued that the relationship of mother and baby is severed as soon as the mother has given birth, no matter at what period of gestation that may occur.

Today all agree that the premature infant should be cared for by the pediatrician. He is to assume full responsibility and obligation for its care as soon as it is born. He must make early preparation to receive the infant and care for it properly at the earliest moment.

It has been found that the majority of premature children succumb during the first 24 to 48 hours of life. Those who survive

this critical period have a 50 percent chance to live. Infants who live through the first eight days have a 75 percent chance to live. Careless management during the first 24 hours results in many needless deaths, which should be avoided if possible. It is here, more than in any other branch of pediatrics, that the training and skill of the pediatrician counts most. There is no time to hesitate, deliberate or to consult reference works in the library. It pays to have had that done before the premature infant is born, and to have it stored away in the readily available recesses of one's store-house of gray matter, for ready application when the necessity arises.

Symptoms of Prematurity: Where the mother's history is not dependable, as frequently happens, we may designate a baby premature when the color of its skin is purplish; its cry feeble or when it cries only seldom; its respirations slow and shallow; its turgor poor; when the face has an "old man" expression; and when its weight is below 2500 Gm. (5 pounds).

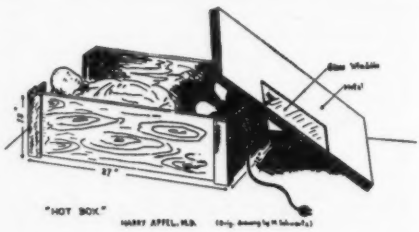
Care of the Premature Infant

Ideal care of the premature infant is not within the scope of an individual physician or institution, unless there be constructed a specially adapted nursery to serve such patients expressly, similar to the one at the Infants Hospital of Boston. There they have constructed a specially built unit, consisting of three rooms furnished with a central heating and air conditioning system, where the temperature, humidity and purity of the room atmosphere is assured and may be so maintained day and night, winter and summer.

But one need not be disheartened. One can accomplish a great deal with a much simpler, even though less "ideal," equipment. I am convinced, from results obtained in many cases so managed, in private homes as well as in hospitals, with encouraging results and at a minimum cost, that this is possible. The important factor is that the doctor must become acquainted with the important details and disregard the trivial and the superfluous.

There are several rules that must be observed religiously: The baby must be isolated, not because it is infected, but rather because everyone else who may come in contact with the baby is potentially infected. The doctor must wear a fresh gown and must scrub before entering the baby's room, and he should not enter too frequently. With the helpful information from an intelligent nurse, he can direct the treatment of the baby without entering the room too often. The hospital intern, because he wears a white uniform, does not give special assurance against being a carrier of infection, especially in a general hospital. The nurse alone is to enter the room whenever necessary. It is, of course, essential that the nurse be free from any respiratory infection. Members of the family, excepting the mother, should not enjoy any special privileges.

The Room: A room 12 by 14 feet is preferable, because the temperature and humidity can be more readily regulated. The winter season has its advantages, for the same reason. The room temperature should be



maintained, if possible, between 75° and 80°F. The smaller the infant, the higher should the room temperature be. The moisture should be maintained at about 60 percent, if possible. When one realizes that, according to estimated figures, a room of the size here given would require 4½ gallons of water per hour to maintain that degree of moisture, one realizes the inadequacy of the traditional pot of water that is usually placed on the radiator to replace the moisture consumed by the excessive heat of the room. This is where we fall short of the ideal. But with a little ingenuity and perseverance we can keep the air of the room fairly moist, by saturating sponges, by hanging moist sheets about the room, etc.

The Incubator: No incubator yet invented is good, in my estimation, save the elaborate outfit I have mentioned, built in at the Infants Hospital, Boston. The next best, which has served me for many years, with excellent results, can be constructed by any one within a short time, at a cost of about $1.50, out of a few boards, several incandescent bulbs, a piece of electric wire and a house thermometer.

The box that I name "The Hot Box" has five sides, lacking a bottom. This "Hot Box" is placed over the baby, who is dressed very lightly, (in Vienna it is left naked). Its head is not covered by the box. The current is turned on, burning as many bulbs as are needed to furnish the desired degree of heat. A glass window in the box will show the thermometer, as well as the condition of the baby's clothes, etc. The original model of this apparatus I observed at the *Algemeines Krankenhaus,* at Vienna (the Pirquet Klinik), originally made by Professor Noble, with whom it was my privilege

to work in 1921. The baby may be fed as often as prescribed, without disturbing the body heat. The temperature under the "Hot Box" is kept higher than the room temperature—nearing 90° to 95°F. The baby's napkin may be changed several times daily and the parts washed. A small-sized cradle light, as used in any hospital, may be employed, using blankets to cover the two open ends, with fair results.

The forcible removal from the baby's pharynx of the aspirated mucus, actual or imaginary, has caused many an infection of the mouth, with its dire consequences. Gentleness is essential.

The removal of every vestige of vernix caseosa from the newborn premature infant is not necessary and may prove dangerous, for it causes skin irritation and frequent infections. The best method is to wrap it in a warm blanket as soon as possible, without even tying the cord, but merely clamping it, omitting the water or oil bath. The baby is immediately placed in the "Hot Box," in order to avoid exposure of the body. Eight hours later one will find the skin fairly clean and the worst part of the vernix on the blanket. It is then that the baby receives its first bath. In the hospital where I am in charge and where this rule was put into effect, we have not had a single case of skin infection of the newborn in seven years.

Feeding

The mother's breast is never ready when the premature infant is born and rarely does it lactate to a degree sufficient to answer the baby's needs. In some cities one can obtain human milk through some welfare organization. Such milk is preferable. The objection is its cost—in New York it is thirty cents an ounce. Some of my babies have consumed $1.25 to $3 worth of milk a day. That is rather expensive, compared with the average budget of a modest family today. Grade A or certified cow's milk has answered the purpose in the majority of my cases. Never have I lost an infant, no matter how small at birth, where I could directly attribute the death to feeding difficulties. Occasionally an infant has an allergic sensitivity to cow's milk. In that event it is not safe to experiment with goat's or any other milk than human, no matter what the cost.

In some quarters, of late, evaporated milk and lactic-acid milk, according to Marriott, is being used, with good results. I have not seen the necessity to change what I have learned to use over many years' experience. I have known many an infant to vomit lactic-acid milk incessantly, and be promptly relieved by an orthodox milk-barley-water formula.

The following routine has been practiced for many years, with favorable results: Four to five hours after the birth of the baby, it is given 1 dram (4 cc.) of warm tea, by means of a dropper with a soft-rubber tip. This is repeated every hour or two for the first twenty-four hours. In some clinics the babies receive no food for 24 hours. If the color be poor after that, a hypodermoclysis of 50 cc. of a 5-percent solution of dextrose is given. This is to be repeated in 6 to 8 hours, if the color does not improve. If the respirations are irregular and rapid, whole mother's blood, 50 cc., is given intragluteally.

On the second day, I commence to feed with human milk, 1 dram (4 cc.) every hour during the day, and every three hours during the night. This milk is either obtained from some welfare organization or "borrowed" from some other mother, whose Wassermann reaction and history are known to be satisfactory. This milk is boiled, kept on ice and fed diluted with equal parts of water, using a Breck feeder or a dropper with a rubber tip. Where no human milk is obtainable, lose no time, but use cow's milk, two parts, to barley water, one part, sweetened with cane sugar.

In closing, permit me to say that, in point of importance over everything else that has been enumerated that will determine between a living and a dead baby, nothing can take the place of a conscientious nurse. It is the nurse, here as in many other medical and surgical problems, who will ward off failure, as nothing else and nobody else will.

988 Park Place.

MIDDLE AGE

For those who aspire to make the period known as middle age comfortable, fruitful and happy, the keynote of conduct must be "moderation." In matters of food and exercise, work or play, the middle-aged must conserve their powers. Even in such common matters as sunshine and fresh air one can go to extremes, like the nudists and sun-bathers; and, in the matter of food, it is notorious that we cannot be trusted. Faddists often eat too little or a one-sided diet; but most commonly we overeat.—EDITORIAL in Brit. J. Phys. Med., Apr., 1935.

The Local and Intravenous Use of Hydrochloric Acid

By Burr Ferguson, M.D., Birmingham, Ala.

I NOW have under observation an itinerant machinist with a severe lesion of the penis, in whose case I have been fortunate enough to avoid the old and well-used procedure of dorsal incision of the prepuce, by daily and, several times, twice-a-day irrigations with hydrochloric acid. The patient and I have had such satisfaction from the behavior of his complicated initial lesion that I shall report his history.

Five days before he came to me he had found an adviser, in a small town in the South, for a "sore" on the glans penis. This significant lesion no doubt aroused great fears for the future health of the patient. Hence it was evidently determined that the initial lesion must be destroyed. It was! An application of pure phenol was made.

With patience, intense pain and difficulty, the foreskin was retracted, revealing a large area of dense, necrotic tissue, several sections of which were removed with scissors. As quickly as possible the area was bathed in hydrochloric acid solution, 1:250, or 4 cc. to a liter of distilled water. An intravenous injection of the same strength was given and the patient asked to return in the afternoon of March 14.

At this visit a catheter was inserted under the foreskin and the burned area irrigated with a 1:250 solution of hydrochloric acid. These procedures were followed for four days, except the retraction of the foreskin. The patient found work on the fifth day and has been able to go on with six days work a week.

After the irrigation, with cotton on an applicator, 40-percent calomel ointment was inserted under the prepuce and spread over the initial lesion complicated by the burn. The City Laboratory reported 3-plus Wassermann and 4-plus Kahn tests.

On March 22, the patient reported that, after a self-given preputial injection (he had been given a bottle of the 1:250 hydrochloric acid solution, with a blunt-nosed urethral syringe), a large mass of white tissue had been seen and removed.

On March 24, I had my second view of the lesion. There was a large, deep erosion, from which the necrotic mass had been removed, and active granulations were seen. The foreskin was easily retracted, all swelling having disappeared. Every other penis I have seen in such condition had had a dorsal slit. I am pleased that it was not necessary in this case.

This patient has had, once a day, an intravenous injection of hydrochloric acid of the same strength as the local application. He is looking much better and still working every day.

Germicidal Action

I have used all manner of germicides, and until I began the local use of hydrochloric acid I had completely lost confidence in all of them. In the *J. A. M. A.* for March 16, 1935, Dr. A. U. Desjardins calls attention to the rapidly decreasing use of these agents in the treatment of gonorrhea.

It is rare that we find a perfect check between laboratory determinations and clinical results. Apparently this happy combination is found with hydrochloric acid. Six months ago I began its use on ulcers, both syphilitic and simple, in the strength reported above, with, of course, the intravenous injection of the same strength. The effects in clearing up the lesions were so much more quickly seen than after the intravenous injections alone, which I had been using in such cases for a long time, that I was forced to conclude that some potent chemical was liberated by the acid application. In the consideration of this problem no explanation seemed so simple as that furnished by the chlorine content of the hydrochloric acid, and its apparent quick liberation. At any rate, clinical results were excellent, so it made little difference to me whether such results were attributable to the hydrogen or the chlorine or the combination of the two. Bacteria died under the wet dressing I was using.

A request was made of the dean of the Medical Department, University of Alabama, Dr. Stuart Graves, to observe the behavior of treponemas, gonococci and pyogenic organisms, in cultures, in the presence of hydrochloric acid, 1:250. To my satisfaction, Dr. Graves turned my letter over to Dr. Ralph McBurney, professor of bacteriology, for consideration. A copy of Dr. McBurney's report follows:

"We have subjected twenty-four-hour, beef-infusion broth cultures of *Staphylococcus aureus* and *Streptococcus hemolyticus* to the action of hydrochloric acid in the dilution named. Exposure of both types was at a constant temperature of 37 degrees C., for successive periods of 5, 10, 30 and 60 minutes, and for 12 and 24 hours respectively. Organic matter in the form of 10-percent horse serum was not added to the hydrochloric acid solution. The following results were obtained:

"The 5, 10 and 30 minute exposures failed to kill both types. The 1, 12 and 24 hour exposures resulted in complete germicidal action, all subcultures from the original tubes being sterile after 24 and 48 hours incubation

at 37 degrees C. We are unable to try this out upon gonococci and *Treponema pallidum*, as we do not keep these organisms in stock, owing to their fastidiousness in culturing. Because of this and their greater vulnerability to the action of germicidal agents in general, as compared to the organisms we have used, it may be inferred that a hydrochloric acid solution, 1:250, will kill them within the same time period as determined above, and in all probability sooner."

I have used the hydrochloric acid, 1:250, on small, infected wounds and abscess cavities, after evacuation of the pus, and never have I seen such lesions heal so quickly. The cicatrix on one of these now looks as if the lesion had healed by first intention, although a packing, saturated with the acid solution, had been put into the cavity after the incision and first draining.

Corroborative evidence of the value of hydrochloric acid as a local application is furnished in the report in *Medical World* (July, 1934) by Dr. C. W. Baynham, of Amarillo, Texas, on the treatment of a large, second-degree burn by the application of a solution of hydrochloric acid, with quick relief from pain, rapid healing of the lesions and freedom from infection.

I am using the acid as a germicide in all infections whose foci enable me to make an application. Save for infected wounds and ulcers, I have not had sufficient experience to suggest any particular strength for best results in the several infections in which I have used it. With ulcers and infected wounds, however, hydrochloric acid, in solutions from 1:250 to 1-percent, in sterilized or distilled water, is provocative of such cleaning and healing as I have never known before. One may see this phenomenon in infected wounds and ulcers simply by the application of the acid as an irrigation and wet dressing, without the intravenous injections.

The *Journal of the American Medical Association*, on a number of occasions, has warned the medical profession against the intravenous use of hydrochloric acid, because of the far-reaching ill effects that might follow the injection of an acid into the blood stream. No reasons were given for this opinion. There is a clinical answer to this opinion in a laboratory report from the Birmingham City Laboratory, received recently, and it so conclusively answers this opinion, given without facts to back it up, that I shall report the history of this case of syphilis, which illustrates so clearly the after-effects of hydrochloric acid in that disease.

HCl in Syphilis

In August, 1934, a friend asked me to see a negro woman in her alley home, where she had been confined to bed for 10 weeks. I found a large woman with a temperature of 102°F., tender over both lower quadrants of the abdomen, apparently suffering from an infection of both fallopian tubes.

To reduce the fever and put her in condition for a visit to the nearby County Hospital, I gave her two intravenous injections of hydrochloric acid, 1:250. She went to the hospital on the fifth day after I saw her first. In the clinic the diagnosis of tubal infection was confirmed, but unfortunately, she had 4-plus Wassermann and Kahn tests, so operation was deemed inadvisable.

When giving intravenous injections of hydrochloric acid in solutions as strong as 1:250, great care must be used in the technic, as sclerosis of the vein is apt to occur in some patients, though not in others.

During the following months I gave her 25 injections of Colloidal Mercury Sulphide (Hille) and 90 injections, intravenously and intramuscularly, of hydrochloric acid*; and every blood determination was reported positive, with little variation.

In January, 1935, since there was no evidence of the tubal infection or of syphilis, save the Wassermann-positive blood, I advised her to discontinue the visits and expressed my belief that she would get well without more injections.

On March 24, 1935, she came to me because of an attack of coryza. Blood was taken for a determination and the report from the City Laboratory has been received—negative for both Wassermann and Kahn tests. Of course, one such report is not conclusive; others will be taken at weekly intervals, but, with the appearance of good health in this patient and the negative blood tests, I feel very confident that future reports will also be negative. I am especially confident because this Negro has not had an injection of any kind since January. Had the negative report been made during the series of injections, I would not have been surprised at all to see the next one positive; but there is a marked cumulative good effect to be seen after a series of injections of hydrochloric acid, not only in syphilis but in other infections as well.

In the past two years I have had seven other experiences such as the case of syphilis just described; so whether it be the apparently easily-liberated chlorine of the hydrochloric acid solution, the induced phagocytic activity or the great increase in the oxygen content of the red blood-cells, some powerful force, it must be admitted, is at work in the elimination of the treponemes. My contention is that, if this resistance is so easily made potent against the organism of syphilis, all other infecting agents are still more amenable to its helpful powers. Hence I recommend the use of hydrochloric acid, intramuscularly or in-

*In August, September and October, 1934, injections of hydrochloric acid were given alternately with the colloidal mercury sulphide. After that, only the acid was used.

travenously, in the treatment of most infective diseases.

Curiously enough there is nothing new or original in advice so general, for thirty-five years ago the same recommendation was made about arsenic, twelve or more years before the discovery of Salvarsan†. Buchner's unapplied recommendation follows:

"Inflammation, therefore, is regarded by Buchner as a salutary reaction, which acts, not directly on the exciting morbific cause, but through the specific cells of the organs. This theory of immunity led Buchner to propose arsenical treatment as a remedy against microbial disease, because arsenic is, of all drugs, the one capable of setting up the greatest inflammatory reaction."

My recommendation concerning hydrochloric acid is based on the fact that its injection gives the greatest activity to the essential factor in the inflammatory reaction—the white blood-cells and other forces not so easily seen or known.

Comer Bldg.

†"Immunity in Infective Diseases." Metchnikoff, p. 513.

A Rapid Method of Making Tests for McDonagh Diagnosis

By Fred D. La Rochelle, M.D., Springfield, Mass.

IN my opinion, the work of McDonagh, of London, deserves far more attention than it has received in this country. There is every reason to believe that a new and better approach to many troublesome problems is here afforded, and physicians will do well to acquaint themselves with these discoveries. In practice however this work offers many obstacles and not the least of these is the time and expense involved in making the tests.

The tests, as described by McDonagh and practiced by his foremost pupil in this country, LeBlanc, demand expensive equipment and some 24 hours of time to make them. The expense of the equipment offers an insurmountable obstacle to many, but the time required for making the tests can, by certain modifications described in this paper, be reduced to one hour or less for the complete examination, so that, once the laboratory apparatus is installed and a technician trained, the tests can be done at a cost to meet present economic conditions, and I believe that the results will well repay the effort.

In McDonagh's terminology, the aim of the tests described here is to determine the degree of dispersion and condensation of the protective substance—the colloidal protein particles. The plan here is to indicate, in as simple a way as possible, a routine technic for making these tests. These instructions are not intended for physicians already familiar with this work, but rather for the beginner who may, or at least should, become interested, but may find the indications, given by McDonagh in his books, too brief or not sufficiently specific, and too time-consuming, to the point that the expense is too great for routine practice.

This work represents new and, in a measure, unorthodox ideology, so that what is written here is not intended as final and one must not place too much reliance on the results of these examinations. Certainly twenty-five complete routine examinations, after this technic, should be made before attaching any importance to them, in order to become familiar with the normal picture. Most of the tests may be done by a technician, while for others—the examination of the serum or citrated plasma with the ultramicroscope, for instance—the physician only can be expected to have the necessary qualifications.

While several of the accepted tests are not described here, it must not be assumed that their importance is belittled; it is simply taken for granted that all other standard methods of laboratory diagnosis are employed in the ordinary manner, and that these tests aim to supplement them.

Obtaining Plasma or Serum

The first problem is to obtain the serum or plasma, as the case may be. McDonagh and LeBlanc both use serum obtained by allowing blood to set for 24 hours. The distinction between serum and plasma should be kept in mind. The blood plasma is the liquid part of the blood before coagulation has taken place, while the serum is the clear fluid remaining after an inverse solution of the blood elements has been effected, commonly called coagulation. In the plasma the blood elements are solvated in the dispersion medium (water, in this case), while in the serum, water is solvated in the coagulum and the excess fluid is the serum. In the method here described, the plasma only is used, and that after centrifugalization.

Ordinarily the blood is obtained from an arm vein, but of course it may be obtained from any vein—the ear vein of the rabbit, for instance. Blood obtained from different parts of the body varies in chemical and physical properties, however, and this should be kept in mind. It is, as a rule, easy to obtain blood,

but it is readily conceivable that a patient might be encountered where the veins were collapsed and blood could not be drawn, and that might be just the case where the results of the tests would be most important. In such a case a number of artifices might be practiced, such as obtaining blood by cutting down on the large veins; or blister serum could be used; or spinal fluid has, in many respects, the same composition as the blood. For determining the blood urea, saliva may be used (Hench method.)

Assuming that we are ready to make the tests, a 10 cc. syringe, with a 1½ inch, 25 gage needle, freshly sharpened, is used. One cubic centimeter of a 3-percent sodium citrate solution in water is aspirated into the syringe, the air expelled, and the needle introduced into the vein. It is well, of course, to apply a tourniquet. Blood is then withdrawn to the 10 cc. mark and the whole gently mixed. The citrated blood is then placed in a test tube (not a centrifuge tube), of such length and diameter as the centrifuge will accommodate, and then rotated at 3,000 revolutions per minute for about 3 minutes. This should be determined by experience and will necessarily vary with the apparatus used. At the end of this time the formed elements of the blood will constitute a solid column in the bottom of the tube, and the supernatant liquid will be the citrated plasma.

It must be remembered that all these tests are crude procedures, with little *absolute* value but great *relative* worth, if done in a routine manner by an experienced observer.

The Tests

Assuming that we have the citrated plasma, the following tests are to be done:

1.—Sedimentation rate.
2.—Refraction index.
3.—Blood sugar.
4.—Blood urea.
5.—Macroscopic examination of the citrated plasma.
6.—Ultramicroscopic examination of the citrated plasma.
7.—Special tests.

Sedimentation Rate

Hardly any two observers use the same method for determining the sedimentation rate. It must be remembered that this is a *ratio*—that we wish to determine the relative length of the column of the packed blood elements in the bottom of the tube to that of the supernatant liquid. It can be done by inspection, by assuming that the whole represents 10. If the dividing line is at the middle, we may say the sedimentation rate is 5; if 1/10 lower, we may say it is 6; if 1/10 higher, we may say it is 4; etc. This test is not so exact, in any case, and by simple inspection of the tube, on taking it out of the centrifuge, it can be determined with sufficient accuracy. By giving the matter a little thought this method can easily be correlated with any of the other methods, and it is the simplest method I know of and answers the purpose very well.

Refraction Index

I use a Spencer Abbe refractometer, and it is necessary to have some theoretical knowledge, which is here given in brief. Additional information may be obtained from the manufacturers of the apparatus.

Pure distilled water, at a temperature of 20°C., has a refractive index of 1.3329. This index increases if any solid substance, such as sugar or any kind of salt, is dissolved in the water. The index can be read, by means of the refractometer, to such a degree of accuracy, and so uniformly does the concentration of solution vary with the index, that this concentration can be quickly and easily determined, with a remarkable degree of certainty, by the refractometer.

The instrument is based on the well-known principle that light, in passing from a denser to an optically rarer medium, is bent or refracted from the normal to the boundary surface between the two media, and that there is a socalled "critical angle," beyond which light cannot pass into the rarer medium. Thus it comes about that, if light approaches the dividing surface from a given point, there will be a well-defined line, beyond which no light will pass from one medium to the other. In the Refractometer, this dividing line is brought into sharp focus and the lowest angle at which light passes between the two media might be accurately determined, but in practice it is not common to read this angle, since the index indicated by it has been computed and placed on a convenient scale. Since the index of refraction is a function of the concentration of solutions, a scale may be prepared which reads, not in index of refraction, but in concentration of solution.

In practice, the method of procedure is as follows: First, be sure that the surfaces of the prisms, between which the fluid is to be placed, are perfectly clean. This should be accomplished by washing them with alcohol and carefully wiping them with soft, clean cotton or with lens paper; second, place two or three drops of the fluid to be tested on the ground surface of the lower prism and immediately bring the prisms together and clamp them in position. The only precaution to be observed here is that there shall be sufficient fluid so that, when the prisms are thus clamped, it spreads evenly over the surface of both prisms. This can be determined by looking into the top of the prism box. By exercising care in selecting the angle at which the observation is made, it will be found very easy to determine whether or not the fluid actually makes contact with the entire prism surface; third, adjust the mirror below

the prisms so that light is directed into them; fourth, by means of the rack and pinion on the graduated arc, incline the prisms until a dividing line is observed, through the telescope, between a light and a dark area; fifth, by sliding the eyepiece in its tube, focus on this dividing line; sixth, adjust the rotating or "compensator" drum until the dividing line becomes sharp and as free from color as possible; finally, by means of the rack and pinion on the graduated arc, set the telescope so that the dividing line between light and dark areas intersects the cross hairs. The index of refraction may now be read directly from the scale.

The technic for determining the refraction index of the plasma is very simple and can be done in a moment, yet it is always advisable to obtain personal instruction. The interpretation is difficult and is not discussed here.

Blood Sugar

Either plasma, obtained in the manner described, may be used, or fresh blood may be withdrawn from the finger. There are several methods, and the following has given us satisfaction and is as simple as any.

The procedure employed involves a micromethod (Lamotte), hence the measuring of the plasma specimen must be accurately performed. Adjust the level of the plasma to the 0.1 Ml.* mark by capillary attraction, wiping the outside of the pipette with clean gauze, and transfer the contents to a marked test tube containing 10 Ml. of Reagent A (standard tungstic acid solution). After mixing the plasma with Reagent A, draw some of the mixture into the 0.1 Ml. pipette and let it run back into tube. Repeat until all plasma is removed from pipette.

Insert stoppers and shake for five minutes; filter into a clean test tube and then pour the filtrate into a larger tube (25 M1.) until it is filled exactly to the 4 M1. graduation. By means of special droppers, add 0.5 M1. of Reagent B (potassium ferri-cyanide solution) and 0.5 M1. of Reagent C (sodium carbonate-sodium cyanide solution).

Then place the tube in a beaker of boiling water and heat for exactly eight minutes. While the solution is still warm, add 3 M1. of Reagent D (standard ferric solution) by means of a special 3 M1. pipette. Mix well, cool, dilute to the 25 M1. mark with distilled water and shake thoroughly. Fill the test tube to the 10 M1. mark, place it in the middle hole of the comparator block and compare it to the color standards.

Blood Urea

The test will first be described using saliva. The method can then be used in the same manner, using citrated plasma, only several constants must be used in order to have the reading agree with the figure usually taken as normal. In our case we take 1 cc. of citrated plasma and 4 cc. of water; the result is then about 60, which we divide by 4, making the normal reading near 15.

Directions for the determination of salivary urea index, after the method originated and described by Hench and Aldrich: Collection of saliva. The mouth is thoroughly washed with a half-glass of water. A small piece of paraffin is used to stimulate the salivary flow. The vial marked $\frac{SP}{A}$ is filled to the line; vial marked $\frac{SP}{B}$ is then filled; specimen A is not used; the determination of specimen B is made promptly.

Titration: With a dropper, one drop of saturated sodium carbonate solution is placed in each depression of the porcelain plate. Saliva from specimen B is carefully measured, with a large pipette, into a calibrated index tube, up to the line 5 M1.; then 5-percent bichloride of mercury solution is added to the saliva up to mark 30 in the index tube. With a cork inserted, the tube is inverted 6 to 8 times, thus thoroughly mixing the saliva and bichloride solution.

The small glass tube is inserted into the mixture and the liquid allowed to rise in the tube. From this tube, one drop is added to the sodium carbonate drop on the porcelain plate and the remainder of the contents of the tube blown back into the index tube. If a brownish-red tinge appears on the porcelain plate promptly, the end-point is reached, but if no color or only a canary-yellow appears, the titration must be carried further. In this case, add 6 drops of bichloride, mix and test again with the sodium carbonate. Continue adding bichloride solution to the index tube until the test drop gives the first faint definite brownish precipitate, developing within 3 seconds.

Direct reading of the salivary index is then made from the index tube. If more than 3 or 4 tests drops are removed, correction should be made by adding a value of 2 to the salivary urea index for each 3 or 4 test drops used.

Again, this is only a rough estimate, but the method is simple, quick and sufficiently accurate for clinical work, and its value parallels the experience and judgment of the observer.

Ultramicroscopic Examination of the Serum

Colloidal particles have the property of diffracting light, and it is upon this property that the ultramicroscope is based. Ultramicroscopes, however, do not permit of high magnifications and in practice a cardioid condenser is used in an ordinary microscope. Any of the usual microscopes may be equipped with a cardioid condenser for this purpose.

*Ml. is the abbreviation for milliliter. It is equivalent to a cubic centimeter.

Everyone has observed a beam of light from a window against a dark background and noted the Brownian movements of the "dust" particles in the air. The ultramicroscope is built on this same principle. By means of mirrors, a narrow beam of light is made to illuminate a very thin layer of fluid on a slide, against a black background. In the older types of objectives, it is necessary to introduce a stop to narrow the beam of light, but in the Zeiss microscope, which I use, it is only necessary to close an iris diaphragm built into the objective. Changing over from the cardioid to the Abbe condenser is then only a matter of a moment.

Of course, in order to do this work, it is necessary to have good equipment, and here, as elsewhere, the best is none too good. I may have a different opinion than others about this matter, but in any case I have never been able to understand how physicians will invest large sums of their savings in questionable ventures, and be satisfied with a poor microscope. That this lack of vision is not limited to ordinary men, is proved by these individuals who engage press agents to periodically herald fanciful discoveries, and then pose for photographers, behind instruments that are comparatively little better than junk. One thousand dollars, invested in a good microscope, will, in my opinion, yield higher returns (*if used*, of course), than a similar investment in any other instrument I know of. The technic is simple, yet delicate, and it is a good idea for one not familiar with this apparatus to be instructed by an experienced person. This may mean success, instead of giving up the work in despair. There are so many little refinements in the handling of this instrument that there is no substitute for personal instruction.

Once the cardioid condenser is in place, it is covered with a few drops of oil. I always use Squibb's mineral oil, which is cheap and not so sticky as balsam or other resinous oils and is quite as satisfactory. A couple of drops of serum are placed on a thin slide, a glass cover pressed down, and mineral oil again dropped on this, in the manner of ordinary oil immersion examinations. Citrated serum, as described above, contains the blood platelets as well as the protein particles. I think this is an advantage for it makes it easy to bring the particles into focus, and their number, size, motility, refractibility, and so forth can be noted. As a general routine, the following properties are observed:

1.—Number, size, motility, refractibility and agglutinations.

2.—Precipitation.

Other tests described in McDonagh's first volume are not discussed here, because they are not done as a routine and have less value. Besides, when one becomes familiar with these, he can learn to do the others by reading the technic in the available textbooks on laboratory work.

The results of these tests are conveniently recorded on the following form:

NAME_____ DATE_____

McDonaghgram

Sedimentation rate:
Refraction Index:
Blood Sugar:
Blood, Saliva, Blister } Urea:
Blood Calcium:
Blood Cholesterol:
Wassermann Test:

Ultramicroscopic Examination of Serum

Amicronic Haze:
Ring Particles:
Giant Particles:
Platelets:
Agglutination (large- or small-particled clumps):
Precipitation:
Brownian Movement:

Blood Pressure:

Urine

Specific Gravity:
Sugar:
Protein:
Ehrlich's Reaction:
Pus:

Hemogram Diagnosis:

Remarks:

References

In addition to references given by McDonagh throughout his books, the following works may be consulted.

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6.—*"Diagnostics de Laboratoire."* P. Letulle—Pruvost. A. Maloine et fils. 1924.
7.—"Guida alle analise Cliniche di Chimica Microscopia Batteriologia e Sierologica." Belli. Soc. as. Institute Editoriale Scientifico. Milano. 1927.

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COURTESY AND LOVE

No selfish man can be really courteous. He may have a certain surface polish that enables him to pass muster in society, but chivalry and courtesy can never grow in a selfish heart. They are the offspring of love.—The Speakers' Magazine.

Synthetic Diets, Glandular Derangements and the Vitamins*

By F. E. Chidester, A.M., Ph.D., Woods Hole, Mass.

SINCE 1912, when certain salt mixtures were administered to rats on diets low in fats and lacking in other essential substances necessary to balance the mineral mixtures, we have witnessed the development of investigations that were of incalculable value to medicine, but which have not been linked with the diseases that result from hyperactivity, followed by hypofunction, of the glands of internal secretion.

The Osborne-Mendel salt mixture, containing *ten times* the amount of iodine necessary to protect against goiter, if given in doses of 10 grams of food daily to a rat on a normal diet,[1] is bound to cause goiter, when furnished to rats whose diet is low in protective fats. That such salt mixtures may do so is clearly indicated by the evidence available from McCarrison,[2] Spence[3] and others.

In vitamin A deficiency, we have, according to Tsuji,[4] considerable derangement of thyroid function. Hintzelmann[5] showed that, in the early stages of vitamin A deficiency, the thyroid was hypertrophied and overactive, but that in late stages it was atrophied. I have utilized certain iodine combinations, since 1928,[6] to improve the condition of rats in which the thyroids had ceased functioning, and advanced stages of vitamin A deficiency were manifested. Recently, Wendt[7] has restored the vitamin A to the serum of hyperthyroid patients and experimental animals by iodides, which benefited the goiter.

In the early stages of vitamin A deficiency, we note thyroid hyperactivity, with rapid loss of weight, lack of normal hair growth and, much more important than has been recognized, the incidence of gastric ulcers. Gastric ulcers, described and emphasized for vitamin A-deficient rats by Manville,[8] and admirably discussed by Richards,[9] are to be linked with hyperthyroidism, if we are to accept the clinical evidence of Crile,[10] Friedenwald and Morrison,[11] and Wilkinson,[12] and the experimental findings of Tashiro and Schmidt.[13]

The abnormal metabolism induced by excess of vitamin D, given to rats that lack vitamin A, is such that the normal exhaustion of the thyroids, shown by Garnier to follow on hyperactivity, occurs sooner. Thus we note, as shown by Green and Mellanby,[14] that pus in the sinuses and middle ear, and abscesses of the salivary and lymph glands, with infections of the kidney, urinary and gall bladder, lungs and alimentary canal, appear speedily, if vitamin D is given in the absence of vitamin A.

Such cholesterol atheroscleroses and accumulations as gallstones, such as are seen in advanced vitamin A deficiency, are more speedily developed when protective yeast is low, as I have pointed out elsewhere.[15] The really significant fact, that thyroid hypofunction permits cholesterol accumulations and deranged calcium metabolism, is clearly shown by the work of Simmonet,[16] Turner,[17] and others, on cholesterol, but has been linked with thyroid exhaustion by no one except me, in the field of vitamin research.

The beneficial effects of high fats, as an adjunct to restorative diet, have been clearly brought out in certain of my papers, and the reason thoroughly explained.[18] The value of wheat germ as an adjunct, and the undoubted superiority of cod-liver oil, or similar fish oils or eggs, to synthetic compounds, may be explained, as I have already done, as due to the large percentage of easily-absorbed fats of a highly unsaturated nature, and also to the small amount of iodine in cod-liver oil, egg yolk, spinach, water cress and the like, which prove necessary to restore deranged thyroids to balance.

Abelin, in 1930,[19] has shown that, in experimental goiter in rats, the vitamin A-rich foods are best for recoveries. American drug firms have known for years that goiter is improved markedly by vitamin A-rich diets.

Goiter may be caused by diets that contain an excess of iodine, or may be induced by highly unsaturated fats, or by excess of calcium, or by chlorides, which are halogen displacers of iodine. Thus we may find, in the diets used in various deficiency studies, that a salt mixture may be goitrogenic, through iodine, chlorides or calcium, and that the other constituents of the diet are also concerned, as well. We have discussed fully the cause of rickets,[20] and have experimentally shown that it develops as a result of long-continued derangement of the thyroids, causing excessive losses of calcium and phosphorus. Rachitic diets are different from vitamin A-deficient diets, however, and the importance of studies showing the interrelationships of vitamins is exemplified when we consider that excess of vitamin A will hasten the rachitic condition, if the vitamin D constituents are absent.

If we have, by skillfully concocted food mixtures, been able to evaluate separately the effects of different elements and of essential fats, lipoids, proteins and carbohydrates in protecting against glandular imbalance, that, it seems is a greater thing than the use of the term vitamins. Hypervitaminoses are the result of over-enthusiasm, and the outcome of such activity is bound to be an injury to adults as well as to children, who at present suffer most.

*From the Marine Biological Laboratory, Woods Hole, Mass., aided by grants from the Purnell Fund, the National Research Council, and Sigma Xi.

1.—This and the subsequent references will be found in the author's reprints.

PHYSICAL THERAPY AND RADIOLOGY

ASSOCIATE EDITORS

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FOR RADIOLOGY
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WILBUR H. GILMORE, M.D.

Teeth, the Roentgenologist and the Dentist

IN the past few years the roentgenographic study of teeth has become an important instrument in the armamentarium of the medical and dental professions. Primarily the use of the x-rays in the study of teeth was in discovering focal infection about their roots and similar existing conditions which cast shadows on the sensitized film, enabling interpretation of them.

This procedure was naturally developed by men specializing in roentgenography, and brought to the accepted basis as known today. In the course of this development, dentists readily recognized the value of this procedure in discovering minute and hidden cavities and also in determining mechanical defects which might be present in the patient's mouth. Manufacturers of x-ray apparatus, realizing this broadening field, improved a small unit which could be used essentially for the examination of teeth, and have exploited this unit widely.

At the present time there exists a point of controversy between dentists and roentgenologists, at least in some localities, concerning not only the interpretation but also the technic of a dental examination. It is not uncommon for many roentgenologists to have the patient referred to them for dental examination, which they will perform, make the interpretation and send their report, with the films made, to the referring physician. If a condition is present warranting dental care, the physician then refers the patient to a dentist for follow-up work needed, when, in many cases, the trouble starts.

Roentgenologists examine the teeth with focal infection in view and so interpret; the dentist sees the films and, having more the condition of the crowns of the teeth and their apposition in view, tells the patient that the examination was no good, creating a most embarrassing situation between the patient and the roentgenologist in a great number of instances.

That state of affairs will probably continue to exist until some uniform technic of roentgenographic examination of the teeth has been universally adopted, because the practitioner, in by far the vast majority of instances, wishes to know if there is a focus of infection in his patient's mouth, which may adequately be determined by the usual full mouth study, as conducted today.

One solution to this problem would be for the referring physician to explain to the roentgenologist the information desired and, of course, the roentgenologist will govern himself accordingly in his examination; also, if the patient is going to the dentist for general dental care following the examination, a wide-awake roentgenologist will make his examination with the entire situation in view and avoid undue criticism from the dentist by sensing both aspects of the examination.

Practitioners should remember that, when a dentist says that x-ray films of a patient's teeth are "no good," he is looking at them in an entirely different light than the roentgenologist by whom they were made, if they were made by one, which brings up an entirely different question, avoided at this time.

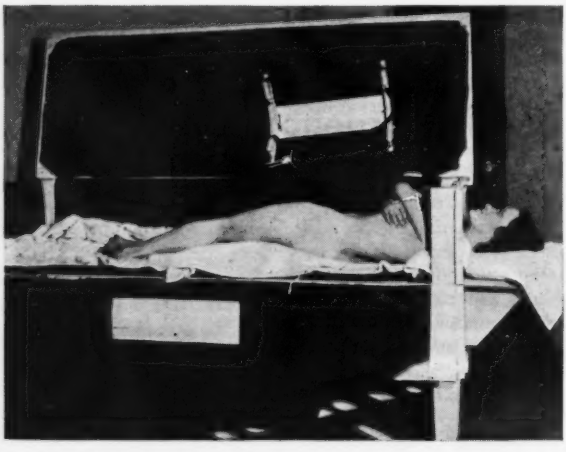
W. H. G.

Notes and Abstracts

Hyperpyrexia with the Inductotherm*

A CONVENIENT method, effective, simple and sanitary, has been devised for the production of electropyrexia by means of the inductotherm. This method has been found to be particularly applicable in the treatment of private patients, where the comfort of the individual throughout the duration of the treatment is of major importance.

Since, with the inductotherm, heating of tissue is produced by electromagnetic induction and the more conductive tissues are heated more rapidly than the less conductive tissues, it is logical, when administering a fever treatment, to apply the cable electrode of the inductotherm to the most vascular region of the patient's body. This ideal positioning can be effectively achieved with a pancake coil, applied as shown in Fig. 1. Two oblong turns of the insulated flexible cable are adjusted over the trunk of the patient within 1 or 2 inches of the body. This distance can be regulated to accommodate patients of different sizes by the supporting device attached to the top of the treatment cabinet.



Courtesy of General Electric X-Ray Corp.

Fig. 1—Cabinet for Fever Therapy Treatment, showing the Patient in Position and the Inductotherm Coil on the Lid of the Cabinet. (The lid is turned back to show the arrangement.)

The rate of increase in general body temperature of a patient depends, not only upon the rate of heat input, but also upon the rate of heat loss by the patient. Heat loss may be due to one or more of the following: conduction through surrounding materials; radiation from the body of the patient; and evaporation of perspiration.

In order to obtain the greatest heating efficiency possible and, at the same time, to assure maximum comfort to the patient, appropriate measures were taken to keep heat loss at a minimum. This was achieved by the use of a specially insulated treatment cabinet, constructed of non-magnetic and thermally and electrically non-conductive materials.

The cabinet is equipped with a special device to raise the temperature of the air within it to approximately body temperature, before the patient is positioned for treatment. This preheating device consists of two individually controlled infra-red heaters, which are operated in conjunction with a fan for forcing the air within the cabinet into circulation. The fan, however, can be operated independently of the heaters and provides an efficient means of reducing the temperature of the patient, when desired.

A thermostatic control regulates the environmental temperature so that it never exceeds 106.5° Fahrenheit. This ambient temperature is sufficient to compensate for loss of heat by the patient through radiation.

The inductotherm, in conjunction with the treatment cabinet, produces a very satisfactory rise in body temperature.

Proper preparation and care of the patient is essential to a satisfactory treatment. The patient to whom an electropyrexia treatment is to be given should be prepared with as much consideration as if he were to be subjected to a surgical operation. Thorough evacuation reduces the possibility of toxic effect to a minimum. Sufficient sedatives to keep the patient drowsy make for better patient reaction. On arrival for treatment, the patient is given an adult dose of a sedative, such as Neumbutal, phenobarbital, Amytal, Pantopon or bromides. Of this group, bromides, in the form of pentabromides, have

*Revista de Radiologia y Fisioterapia, Mar.-Apr., 1935.

proved to be most satisfactory. When the patient nears the uncomfortable temperature range of approximately 102° Fahrenheit, 1/3 grain of Pantopon is administered hypodermically.

H. E. KIMBLE, M.D;
H. J. HOLMQUIST, B.S. (M.E.); and
J. G. MARSHALL, A.B., B.P.E.

Fever Therapy

AN article describing and comparing several methods for producing artificial hyperthermia for fever therapy, by Dr. Stafford L. Warren, 260 Crittenden Blvd., of Rochester, N. Y., and his associates, appeared in the *J. A. M. A.* for Mar. 16, 1935. This article does not lend itself to abstracting, but those who are interested can probably procure a reprint of it by writing to the author.—Ed.

Look for FACTS AND COMMENTS among the advertising pages at the back.

"C.M.&S." is an excellent Journal and keeps me up with the times. I shall always keep it on my library table.—J. F. T., U. S. N.

Treatment of Hemiplegia*

A GROUP of patients suffering with hemiplegia was treated by passing diathermy current through the brain. Subjective improvement in the patients was observed, but only slight objective changes were noted.

The brain temperatures cannot be elevated to a point of causing damage by the ordinary diathermy current. The brain temperature was elevated slightly above the rectal temperature, in the experimental animal under anesthesia. A definite increase in cerebrospinal fluid pressure has been produced. This elevation we believe to be the result of increased blood circulation in the brain and its membranes. It is conceivable that, by improving or accelerating the circulation of the brain, healing may be promoted or hastened. In patients with recent thrombosis, chronic epidemic encephalitis, cerebro-spinal syphilis, improvement of the cerebral circulation by this method may be of benefit. The number of patients of this type studied is too small to make the present observations of great value, but it is our intention to continue these experiments and the results will be reported at a later date.

A. A. MARTUCCI, M.D.,
SAMUEL B. HADDEN, M.D.,
BARTGIS MCGLONE, Ph.D.
Philadelphia, Pa.

*Archiv. Phys. Ther., X-ray, Radium, Dec., 1934.

NEWS

The Passing of Dr. Gilmore

IT is with deep regret that we record the passing from among us of one of the associate editors of this Department, Dr. Wilbur H. Gilmore, who at the age of 55 years, succumbed to a heart attack on April 27, 1935. The last editorial he wrote for us appears in this issue.

Dr. Gilmore was a graduate of Jefferson Medical College, was in general practice for a number of years, and entered the specialty of radiology while it was still young, following it up conscientiously. He was a charter member of the Radiological Society of North America, a member of the Chicago Roentgen Society and attending roentgenologist at the Illinois Masonic Hospital and the Illinois Eye and Ear Infirmary.

During the War he held a captain's commission in the Medical Corps and spent seven months overseas.

Dr. Gilmore was active in Organized Medicine, having served as secretary of the Chicago Medical Society from 1913 to 1922 and as a member of the State Board of Medical Registration and Education for the last twelve years of his life. He was also a fellow of the A.M.A. and a member of the Medical Round Table of Chicago.

Dr. Gilmore was an earnest, able, sincere and hard-working physician, and a warm and loyal friend, who will be greatly missed in professional circles, in the community and even more so, perhaps, by those who had the pleasure of being numbered among his personal friends.

PROCTOLOGY

ASSOCIATE EDITOR

WILLIAM A. HINCKLE, M.D., Peoria, Ill.

The Editor of this Department is pleased to present, in this issue, a variety of opinions by men of large experience as to the best treatment of hemorrhoids. Morley, of St. Marks, who contributes the leading article this month, is one of the best known English proctologists. In his book, published in 1923, he reports over 3,000 cases treated by injections. He has used the method continually since then.

The Choice of Solution for Injection of Hemorrhoids

By Arthur S. Morley, F.R.C.S. (Eng.) etc., London, Eng.

IT has been well said: "There are more ways of killing a dog than by hanging him," and this proverb applies to the treatment of hemorroids. Of the various methods of treatment which have been used, the two which hold the field today are the operative treatment (by ligature or clamp and cautery) and the treatment by injection. With the former I do not intend to deal here; personally I find that I have little or no use for it. Of the latter there are various methods, some of which are good, others are bad, and yet others are indifferent.

Before deciding upon any particular solution, it is obviously wise and proper to have a good working idea of what we wish the solution to accomplish from a pathologic aspect. The earliest idea of the treatment seems to have been to cause the piles to slough out. At any rate, pure phenol was employed, which had that effect, and this solution was used for a great many years. Probably it was responsible to a large extent for the evil reputation which treatment by injection used to bear. Nevertheless, it often had very satisfactory and permanent results—*if* the patient did not die of secondary hemorrhage or sepsis. But if the sloughing was limited to the piles themselves, the results were quite admirable. The aim of injection nowadays, however, is certainly not to induce sloughing of the piles.

Many authors write today, under the misapprehension that the idea of injection is to induce thrombosis of the hemorrhoids. This, in my opinion, is also a complete mistake. True, thrombosis can cure a pile, but the process is very painful and an inherently dangerous one, the dangers to be apprehended being embolism, sepsis and pylephlebitis.

Dr. Cuthbert Dukes, the pathologist to St. Mark's Hospital in London, made some extremely interesting microscopic examinations of piles removed at various intervals after injection with 20-percent phenol in glycerin and water. He described the pathologic changes which he observed, and which to a large extent were those found in simple inflammation of all sorts; i.e., the usual small-cell infiltration, vascular stasis and the rest. Because he mentioned that there was vascular stasis and eventually clotting, the opponents of the treatment by injection seized upon his words to gloat over them and to say, "There you are! We always said that the thing worked by causing thrombosis," regardless of the fact that Dukes referred only to microscopic capillaries as being occluded and not to macroscopic vessels. No inflammatory process of any sort can occur without occlusion of capillary vessels, but that does not mean "thrombosis" or the picture that that word conjures up to the mind.

The consequence of this conception of the aim of injection treatment is that many have used the solutions, which are used in the treatment of varicose veins in the legs with the express purpose of inducing massive thrombosis, such as quinine and urethrane, morrhuate of sodium and the like. Apparently good results can be obtained by the use of these solutions, but they all involve a considerable risk and all are liable to cause considerable and prolonged pain and disa-

bility, and thus to bring the whole treatment by injection into undeserved disrepute.

The object at which we ought to aim should be, in my opinion, neither sloughing nor massive thrombosis, but a mild, aseptic, inflammatory reaction in the submucous tissue, which is sufficient only to lead to adhesions between the mucous and muscular coats of the rectum and obliteration of the submucous space, in which run the blood-vessels which feed the piles.

By far the best solution to procure this result is, in my experience, a 5-percent solution of phenol in almond or other *vegetable* oil. When I first began to treat hemorrhoids by injection, I followed the practice of other British surgeons who practiced injection, and used 20-percent phenol in glycerin and water. I used to get admirable results, upon the whole, and the results as regards permanency were good. But accidents used to occur too frequently for my peace of mind. Quite a number of patients used to have severe and prolonged pain, due to massive sloughing of the piles, and in about 1 in 400 cases there was dangerous secondary hemorrhage, due to the sloughing opening up a vessel of some size. I am happy to record that I never had a fatal case, but there were several which were sufficiently alarming to help to turn my hair grey. Consequently, I tried weaker solutions such as 10-percent phenol in equal parts of glycerin and water. Complications with such weaker solutions were less frequent, but the number of injections had to be increased considerably and recurrences became numerous.

It was at this stage (in 1927) that I ascertained what was being done in the United States of America, and that I entered into correspondence with Dr. Blanchard, of Youngstown, Ohio. He very kindly sent me much literature upon the method devised by the late Dr. Albright and himself. He recommended a solution of 5-percent phenol in Wesson Oil, with a little menthol added; and he furthermore introduced me to the submucous technic. At once the number of complications which I encountered fell almost to zero, whilst my results were almost as good as with my former methods. I very soon found that any vegetable oil acted as well as Wesson Oil, and I substituted almond oil for the Wesson Oil, because it is more easily obtainable in London, and because I fancied that Wesson Oil was apt to produce headache and malaise in some patients. After a time I tried leaving out the menthol, and I found that this did not alter the effects produced in the least.

The solution which I am using today is, therefore, a *5-percent solution of phenol in almond oil*, and I am using it to inject *submucously*, after the manner so well described by Dr. Blanchard, Dr. Lawrence Goldbacher and others. It is injected high up under the mucous membrane—as high up as the membrane is thrown into loose folds and corrugations. So long as one keeps well above the columns of Morgagni one is not liable to produce any severe pain by this method. As long, also, as one places the solution sufficiently deeply, one never produces sloughing. If the oil is injected into, instead of under, the mucous membrane, one may produce a little superficial ulceration. This can only happen through an error of technic, and does not cause any severe pain.

It is important to observe that the oil in the solution must be a vegetable and not a mineral oil. Dr. Curtice Rosser, of Texas, has described massive indurations of the rectal wall, which he has removed many years after the patients had had their hemorrhoids injected. He found, by cutting sections stained with osmic acid, that these indurations consisted of particles of oil, surrounded by fibrous tissue. Such indurations do not occur with vegetable oils, which are absorbed completely, and are due only to the use of mineral oils, such as liquid paraffin.

Some years ago I got in touch with a large number of former patients, whose treatment I had completed not less than three years previously, and I ascertained from them their then-present condition. I found that, of those from whom I received replies, 79 percent remained absolutely comfortable and free from symptoms. Of the remaining 21 percent, many had only quite trivial and occasional discomforts.

I had gone through the same procedure some years previously, with a series of cases which had been treated with the old 20-percent phenol in glycerin and water. The permanent cures in that series amounted to 83.4 percent, so that, as regards recurrence, the older method—in my hands, at any rate—had produced slightly better results. But the difference in the incidence of complications is so much in favor of the 5-percent phenol in almond oil that nobody could hesitate to choose the latter. Since I first introduced it to my colleagues in England, it has advanced steadily in favor, and is, I believe, used by the large majority of those who treat hemorrhoids by injection in this country at the present day.

ONE'S WORK

With regard to one's work . . . I suppose the desirable feeling to entertain, is always to expect to succeed, and never think that you have succeeded.
—Dr. Arnold, of Rugby.

NOTES AND ABSTRACTS

The Treatment of Hemorrhoids*

KLECKNER says that hemorrhoids are usually caused by bacterial infection at the pectinate line, where inflammation, principally of the crypts, progressively lowers tissue resistence and dilatation and thrombosis follow. The external type is a result of pathologic invasion of the circumanal plexus of veins. Other conditions usually classed as causes of hemorrhoids are only secondary factors.

In the early stages, characterized by much bleeding and little prolapse, treatment by injection methods gives brilliant results and a cure may be expected in about 90 percent of the cases.

In the second stage, characterized by little bleeding and much prolapse that goes back unaided, the ambulant treatment will cure only about 40 percent of the cases.

In later stages, with little bleeding and much protrusion that must be replaced, conservative methods offer little, if any, promise of a cure. Here surgery alone gives satisfactory results. The greater the complications of internal hemorrhoids, the less chance there is for cure by conservative methods.

Of the electric agencies, electrocoagulation and electrodessication, in competent hands, have given best results. However, electricity does, in a round-about way, what can be done more easily, more quickly and equally as well by injections and operations.

Recurrences occur, whether treatment is by injection, electricity or operation. However, in a ten-year period, recurrences following surgery by an experienced proctologist are practically negligible. This is not true of hemorrhoidectomies done by the general surgeon. A 15 to 25 percent recurrence rate is the rule in cases treated by injection, whereas electrical methods show about half that number.

The Injection Treatment of Internal Hemorrhoids†

BALCH, of the Rectal Clinic, Massachusetts General Hospital, says that, since the Clinic was organized in 1928, the number of hemorrhoidectomies done in the hospital has steadily decreased. In 1929 there were 42 cases; in 1930, 26; and in 1931, 6; and in 1932, only 5. These figures show pretty well how successful is the injection treatment of the average case of hemorrhoids.

During that time, 359 cases were treated by the injection method. Of these, about 50 cases were treated with a 5-percent solution of phenol in oil. In the remaining cases, quinine and urea hydrochloride was used. The phenol in oil was discontinued, largely because of frequent sloughs. They had five sloughs in the 50 cases treated with phenol and 27 in the 309 cases treated with the quinine solution. None of these were serious and all subsided within a week or two.

Sufficient of the solution was injected into the center of the hemorrhoid to distend the mass, without making the surface white and shiny. This usually required about 1 to 1.5 cc. Following the injection the site was massaged with the finger, to distribute the solution more evenly, thus preventing cord-like fibrosis.

Usually the patient complained of no symptoms after treatment. Occasionally there was a little pain, coming on immediately, but more frequently about twenty to thirty minutes later. This sometimes lasted about one hour, and was relieved by a hot sitz bath. Severe pain was noted in 3 of their series, and prolapse with thrombosis in 7. The latter condition was probably due to the fact that the patients did not replace the prolapse when it occurred. Treatments were given once a week. Ninety-one (91) percent of cases required five or less treatments to secure a clinically good result.

Balch concludes that the injection treatment of internal hemorrhoids can be satisfactorily carried out in about 85 to 90 percent of cases seen, with 5 to 15 percent of recurrences in three to five years. The treatment is almost painless and practically devoid of serious consequences. Patients are satisfied with the result.

W. A. H.

Hemorrhoidectomy vs. Office Treatment*

CARTWRIGHT thinks that proctologists have so refined the technic of rectal surgery that a hemorrhoidectomy today can offer the patient with hemorrhoids a quick, safe and relatively painless method of getting rid of this ailment. He prefers Fansler's modification of the ligature operation, done under block anesthesia. The clamp and cautery method is now practically obsolete among proctologists, as is also the Whitehead operation.

Office treatment is often resorted to because the operator is not competent to perform a

*Penn. M. J., Dec., 1934.

†New Eng. J. of Med., Jan. 10, 1935.

*J. Ind. St. M. A., Oct., 1934.

hemorrhoidectomy. In competent hands, however, such treatment gives quite satisfactory results, especially in uncomplicated cases of first and second degree hemorrhoids. Third degree piles show a low percentage of patients permanently cured. If patients are to be kept ambulant, many weeks will be required to complete the work.

Negative galvanism, he finds, gives very satisfactory results, but the necessary equipment is cumbersome and the treatment is time-consuming. Diathermy is quicker, but must be used more cautiously.

Injections, either of quinine and urea, 5-percent solution, or phenol, 5-percent, act much the same as negative galvanism—they produce a plastic exudate which fastens the loose rectal mucosa down to the muscularis.

Recurrences are apt to follow any non-surgical method of treating hemorrhoids and may even follow hemorrhoidectomy, if the veins are not completely destroyed. Such recurrences are particularly apt to occur unless normal habits of elimination are established.

W. A. H.

Hemorrhoids In Women

GABRIEL, of St. Marks ("Proc. Roy. Soc. Med.," 1931), says that the injection of piles is more difficult and relapse more common in women than in men. He believes that this may be due to the fact that women tend to have the interno-external type of pile, or because of pelvic congestion, uterine enlargements or retroversion, chronic constipation and the frequent inability of the sex to get efficient bowel actions without straining. He finds that the sclerosis produced by a 5-percent solution of phenol in oil is extraordinarily firm and lasting, if the method is applied carefully and with good judgment to the right cases, by the giving of adequate doses at the right level and depth. With the proper technic, the treatment will be found very valuable, with a more extended range of usefulness than that ever afforded by the older methods.

Hemorrhoids

THE worst or most extensive cases of prolapsing hemorrhoids will yield as readily to the injection treatment as will the milder forms, when they are properly injected.

If internal hemorrhoids are taken care of in time, there will be no external hemorrhoids.—DR. T. F. MCNAMARA, in *Am. Med.*, Feb., 1935.

Treatment of Hemorrhoids*

AFTER having treated more than 5,000 cases of hemorrhoids by the injection method in the past eighteen years, Fansler, of Minneapolis, has arrived at certain definite conclusions concerning its use and limitations. He re-emphasizes that only internal hemorrhoids, that are not fibrous and that can be replaced above the internal sphincter and will remain in that position, are suitable for injection.

The solution used, he thinks less important than the technic. He uses quinine and urea, usually 5 percent; phenol, 10 to 20 percent in equal parts of glycerin and water; and 5 percent phenol in olive oil. The latter he thinks overestimated. The symptoms may disappear quickly after injections, but a real cure is not to be had by a few treatments.

Certain complications may occur with this method, but they are at least no more serious nor probable than with surgery. Anyone who says that he has had no complications has either done but few cases, or is not carefully observing his patients. Pain, slough, hemorrhage, abscess and fistula have at times occurred.

Fully 50 percent of all cases of hemorrhoids cannot be completely cured without operation. Once the public can be made to realize that hemorrhoidectomy is no longer the agonizing operation of former years and that results are more permanent, the ambulatory method will be less popular.

His technic of operation is original and unique. With slight modification it can be applied to any case of uncomplicated hemorrhoids.

With the hemorrhoid in its normal position, through a special slotted anascope, a plain catgut suture is placed through the uppermost portion of the hemorrhoid, including the blood supply from above. Two parallel incisions are now made from the lower pole of the pile up to the ligature, and a longitudinal V-shaped piece of tissue, which should include the hemorrhoidal veins, is removed down to the circular muscle coat of the rectum. The cut edges are brought into apposition at a few points with plain catgut. Sufficient mucosa and anal lining should be left to avoid stricture. Hot Sitz baths are started the next day. The bowels are moved by an oil or water enema on the second day. The patient usually leaves the hospital on the fifth day.

J. Iowa St. Med. Soc., Jan., 1933, and *Minnesota Med.*, May, 1934.

IT IS MORE BLESSED TO GIVE THAN TO RECEIVE

If you have had sufficient experience in the treatment of hemorrhoids with the injection of phenol, quinine and urea, or other solutions to enable you to give a valuable estimate of the relative values of such solutions, write the Editor of this Department, giving brief but specific details, so that we can pass it on to the profession.—W. A. H.

A LIVING FOR THE DOCTOR

(The BUSINESS of Medicine)

●

Medical Service by Contract

By G. J. Warnshuis, M.D., Cedarburg, Wis.

A CERTAIN politician, a few years ago, facetiously remarked, when discussing farm relief, that there was hardly any need for that because the farmer had already been relieved of almost everything he had. Something of the same kind of situation is developing in the practice of medicine.

Many of the older members of the profession are misled concerning the seriousness of the situation by the fact that they were able, in times past, to accumulate a competence when fees were small and collections were almost as serious a problem as they are today. They do not realize that the character of medical practice has changed just as radically as the economic order in general has.

In the old railroad-building era, millions of immigrants were pouring into this country and either finding jobs with good pay or developing farms, the products of which found a ready export market. Economic principles and policies that were sound for those days can scarcely be made to fit a period in which the best intellects of the country are searching in bewilderment for an outlet for our surplus labor. The old feeling of self-sufficiency is gone. Even the man who has a job hesitates to pay his bills on pay-day because he has little certainty about the next pay-day. The farmer who cheerfully promised to pay in the fall, when he sold his hogs or other crop, is probably trying to find a way to make up what he lost on last year's crop and that of the year before.

Aside from this general economic distress, other conditions have changed the nature of the demand for medical care. Epidemics of scarlet fever, diphtheria, typhoid, measles and whooping cough formerly swept the country, with devastating effect and almost annual regularity. The last influenza epidemic put many a struggling doctor on his feet financially. This was hard-earned money, made with no small risk and often under great physical strain, but it was business and "brought home the bacon." Most popular conceptions of the family doctor are founded on this sort of experience—the doctor dashing off on his rounds of acutely ill patients and bringing babies into the world between times.

"They sure were hell on horse-flesh in those days."

Then there were the "spring tonics" and the quinine and the fever medicine. Today, the newspapers and the radio tell people what to go and buy in the drug store.

All the office equipment a doctor needed to satisfy his patients, in the old days, was a prescription pad or a stock of medicines. Then came the x-rays, the hemocytometer, and sphygmomanometer to attach to a patient's arm and show him how high his blood pressure is, and scores of other things.

The marvelous development of surgery since the beginning of this century, especially goiter and gynecologic surgery, made it still more difficult for the general practitioner to retain his following and their confidence in the simple remedies he dispensed. The dollar or two paid for an office visit and medicine naturally appeared much larger after being "shook down" for four to five hundred dollars to have a goiter or the ovaries extirpated. There is nothing like a big bill to discourage a neurotic from making too frequent visits to the doctor. Of course, for those doctors who had the facilities and were aggressive enough to do their own surgery, this *development* was not so unfortunate; it even served to strengthen their prestige with the public.

The dramatic glamour of surgical operations and the lucrative fees they were supposed to bring (and often did), attracted many young men to the study of medicine. Large endowments of medical schools and hospitals made it possible to accomodate them in their ambitions to emulate the Mayos, the Murphys, the Deavers, and all the other brilliant weilders of the scalpel, until, at the present time, we have about one active practitioner of medicine to every thousand of the country's population—at least twice as many as are needed for efficient service.

On the other hand, much of the work that was strictly in the field of medical practice has been turned over to lay technicians. Practically every hospital has a nurse anesthetist. Chiropodists remove corns and calluses and fit arch supports. Dietitians prescribe diets. And then we have x-ray

technicians; physical therapy technicians; ambulance orderlies; laboratory technicians, and so on, all performing services that the doctor, through his training, could readily qualify for and derive substantial income from while building a practice.

So far have we come from the doctor of earlier years, who was not adverse to cleaning his own instruments, mixing his medicines, and perhaps even sweeping out the office and looking after his horse, that many young doctors might consider it beneath their dignity to take over the work of these lay attendants. There is nothing, however, that lends dignity to one's position like a well-filled purse.

This is the situation that our noble profession has drifted into through the uncontrolled operation of natural economic forces, under a policy of socalled "individualism." How are we going to find sufficient employment for all these doctors our medical schools have been turning out, and what kind of financial security can be assured them?

The solution is obvious, but the means for putting it into effect are almost unobtainable. Before relief can be secured, we are likely to fall into the demoralizing debacle of State Medicine, which has already made large encroachments on private practice.

In the prevailing circumstances of medical practice, the doctor is consulted only when the patient is badly frightened or appears seriously ill. As a consequence, most of his art is exercised in meeting the emergencies of acute infections or in surgical attempts to correct grave organic lesions after irreparable damage has been done. The question of deciding when medical attention is required is left entirely to the patient's wishes. Such a policy must assume that a doctor's services are required only when symptoms become grave enough to alarm the patient or those immediately concerned in him. That may have been all right in times when diseases were recognized only in their advanced forms and when methods of diagnosis and treatment of incipient disease and functional disorders were extremely unreliable.

Newer methods and modern conceptions of morbid function open an enormous field for the application of medical science and the improvement of the public health, if the public will avail themselves of this service and the individual members of the profession will qualify themselves to provide it efficiently.

The great loss of life and physical efficiency resulting from preventable disease is a matter of greater concern, in dollars and cents alone, than the reputed high costs of medical services. It may astonish many to learn that the past twenty-five years have seen a marked increase in deaths from gall-bladder disease, ulcer of the stomach and intestines, appendicitis, goiter, cancer and heart disease. Five hundred thousand people die annually in this country from degenerative diseases — heart disease, arteriosclerosis, diabetes, kidney and liver disease. Our insane asylums have a population of 300,000; and there were over 22,000 suicides last year. Every year, 200,000 children die. If space permitted I could enumerate many other facts that indicate a deplorable state of health, for a civilized nation.

The fault is, not with medical science, but in the barriers of indifference, ignorance and economic disorganization that make it impossible to apply our knowledge to the control of these diseases.

Doctors must be employed to keep people well, to prevent disease, and not merely salvage what they can after serious damage has been done. Many laymen are sympathetic to this opinion, but they do not fully realize the practical significance of it. Agitating for annual health examinations accomplishes practically nothing in this respect. State Medicine, in its monopolistic character, would destroy individual initiative and the personal interest of the doctor in his patient.

A Health Adviser

A plan by which the patient contracts with his doctor directly, to provide him with all the medical service which he and his dependents may require, on an *annual fee basis*, will accomplish the much desired object of distributing medical costs more equitably. It will stimulate the application of our knowledge of preventive medicine and eliminate some of the difficulties of our present system of private practice, such as the tendency, on the part of patients, to neglect acute illnesses, and on the part of physicians, to adapt the management of a case to what the patient wishes to pay. It will remove any possible suspicion of the doctor's motives in recommending repeated visits and various measures that might be considered costly, if paid for individually.

The annual fee may be set at a sum that will include the cost of whatever x-ray studies, laboratory tests, etc., may be required in a given group. While it naturally eliminates the opportunity to charge large fees for individual cases and will be objected to mostly on these grounds, this difficulty is offset by the assurance of regular and easy collections under the contract plan. It is better to have a number of persons, each paying a small sum, than to try to collect a big fee from one and a small one or nothing at all from another.

A study of the costs of furnishing medical service under contract arrangements of the past and present, and the average cost per patient of the services of general practitioners under the fee-per-visit policy, will quickly reveal how cheaply such a contract service can be bought, even with liberal allowances for

increased demands for service under this plan. Two hundred families at $25 each, for example, would provide an income of $5,000.

A plan of this kind is the best substitute for State Medicine and offers all the advantages claimed for it, without the disadvantages of lay management, high administrative costs, political favoritism and possible malingering. It does not limit the choice of a physician, nor is the doctor obliged to contract with families that prove uncooperative. It cannot, however, be put into operation generally without the whole-hearted support of both lay and professional interests. To secure such cooperation is a problem of no small dimensions.

NOTES AND ABSTRACTS

Notes on Socialized Medicine

CITIZENS of the United States, let alone the medical profession, are face to face with the question as to whether it is the more advantageous to continue with ethical medicine on the good old honorable Red-White-and-Blue basis, or whether the healing arts are to be dispensed dripping with communist red.

Before any man or woman signs up for "Red" medicine, some knowledge should be broadcast as to exactly what is meant by "Red Medicine."

A sample of what it purports to be, although purport and fact in this instance are as antithetical as day and night, has been luxuriously set forth by Sir Arthur Newsholme, distinguished British medical statistician and commentator, and John Adams Kingsbury, of the U. S. A.

Kingsbury is the lay secretary of the Milbank Memorial Fund, whose chief *raison d'etre* would seem to be the willy nilly socialization of medicine. Sir Arthur is a retired English public health official, whose head is filled to overflowing with fanatical ideas of some Santa Claus faculty on the part of governments, even a government so taxeaten as is his own Brittania!

Now Sir Arthur and Mr. Kingsbury went into Russia to burn incense at the soviet's socialized medicine. For a little over a month —that is from Aug. 2, 1932, up until Sept. 7, 1932—the Soviet Union authorities led these two gentlemen round about and pointed out what a fine medical system the U. S. S. R. has built up. *Neither Newsholme nor Kingsbury speak Russian.* Such was the effect upon them of what they saw and of what they were told that this trip of three dozen days in Lenin's land sent them forth literally belching praise and imitation of medicine and all the allied healing arts, as seen through the scarlet spectacles of soviet centers.

Not content with spilling all this rosy paint over soviet socialization of medicine, Kingsbury took a whack at a more conservative report on Russia's socialized medicine, as contained in Sir James Purves-Stewart's book, "A Physician's Tour in Soviet Russia."

Undoubtedly the readers of this article will find of great interest a reprint of a letter sent to a United States medical journal by Purves-Stewart.

In writing to the *New England Journal of Medicine*, Sir James Purves-Stewart states:

8 Buckingham Street,
Westminster, S. W., 1
November 24, 1933.

"*Dear Mr. Editor:*

Many thanks for the sheet from the *New England Journal of Medicine* of November 9th, containing Mr. Kingsbury's letter, in which he criticizes my little book, 'A Physician's Tour in Soviet Russia.'

"I hold no brief either for or against the Soviet regime. My observations on medical conditions in Soviet Russia simply state the facts as I found them. Perhaps Mr. Kingsbury's political sympathies may have colored his views. The facts as I have stated them are correct, that the medical practitioners in Russia are miserably paid, not only in comparison with other brainworkers, such as engineers, but even compared with some of the heavy manual-workers. The Soviet government is building beautiful new hospitals, sanatoria and baby-breeding farms, regardless of expense, but they economise severely on the salaries of their medical staff. Consequently the medical profession now offers no future for an ambitious man. He prefers to become an engineer, an aviator, or best of all a member of the Communist Party. I am truly sorry for these medical men who are gallantly struggling under conditions of economic stringency. True, they have only a 5-hour day, but most of them accept two billets in the day, so as to draw a double salary, and even then they can just make ends meet."

We shall expect to hear more of Kingsbury and men of his type; it is up to us to be ready to combat their insidious propaganda.—*Ill. Med. Jour.*, April, 1934.

CLINICAL MEDICINE AND SURGERY is the most practical magazine I know of.—G. E. B., M.D., Wash.

Regimentation and Medical Progress

SINCE 1929 *five* Americans have received Nobel prizes in medicine, an annual award open to the medical profession throughout the world for outstanding contributions to medical advancement. Germany once had the lion's share of these Nobel awards, but only one such prize has gone to that nation since 1922. The American record since 1929 stands supreme and unchallenged. In short, *medical progress is now definitely centered in the United States.*

These facts have an important bearing upon legislation now under consideration. Through insurance schemes, communism and dictatorships, the medical profession, in practically all other countries, has been regimented and robbed of freedom of action, which has destroyed initiative and crushed the sense of individual responsibility. The same thing would happen in the United States, if we follow the same course.

A few doctors have abused their freedom. So have some lawyers, bankers, engineers, etc. Generally doctors are fair, generous and professionally competent. Each is legally responsible for his professional activity. To deprive them of their freedom and responsibility by regimentation would shift professional responsibility to "soulless corporations," draw into "chain store" practice the lowest-grade physicians, who have failed in competition with better doctors, open up destructive medical advertising, destroy confidence between patients and doctors by giving individual health records to corporations, and permit the exploitation of medical practice by unscrupulous insurance companies, mail-order houses, patent medicine manufacturers, unprincipled newspapers and the radio.

J. R. NEAL, M.D.

Springfield, Illinois.

Relief and Private Payments

THE article, "More 'Relief' Interference," by Dr. Lisk, in the April "C. M. & S." (p. 190), was interesting. Social service workers have always been parasites, living off the income which the medical men have never had gumption enough to demand for themselves.

In our part of the country, however, the "Relief" seems not to be meant as a substitute for the doctor-patient combination, but was established to keep the physicians from starving to death, when confronted by a practice made up, almost wholly, of patients who had no money, as we have been in rural South Dakota.

The "Relief" has said what it can pay us, but *not* what the patient shall pay us. We charge every patient the usual fee, and what the "Relief" pays us is subtracted from the bill, so that he owes us the balance. Some of these people, if they get on their feet again, will be glad to pay what they owe. If not, nothing has been lost by handling the matter in this way. Anything else would be unjust and truly "regimentation."

J. VINCENT SHERWOOD, M.D.

Doland, So. Dak.

[This view of the "Relief" question is a new one to us and seems well worth while, where it can be worked this way.

The trouble is that, in many parts of the country, there seems to be a definite *intention* to establish the "regimentation" which Dr. Sherwood so soundly characterizes as "unjust."

If physicians generally would put such a plan as this into operation and announce it widely, it might do something to help out in the disastrous condition now confronting the profession.—ED.]

Rebuilding Prosperity

THE typical American business man is a good citizen and a man of sound sense. And he knows more about business than any professor in Washington ever will learn, for he learned his trade in the hard school of experience and acquired his wisdom by trial and error. Natural and economic laws provide about all the management and regulating he needs.

He tries to make a profit, but he charges a fair price. If he didn't, a competitor would take his business. If he has a monopoly, and charges too much, people quit buying.

He treats his help fairly because it is good business. If he paid them too little, they would quit work or quit trying. Moreover, no man likes to have employees who hate him.

The typical American business man is proud of his plant and his organization. His self-respect is based on the fact that he is providing work for others and rendering a useful service to mankind.

He is the man who must rebuild prosperity, and he can do it only as he did it before—by free and independent effort to get ahead.

He can survive heavy taxes. He isn't injured by the rules made to curb slave drivers, throat cutters and rogues. But he can't survive useless restrictions made by theorists, who never had to meet a payroll.

ROBERT QUILLEN.

Fountain Inn, S. C.

THE SEMINAR

"A MONTHLY POSTGRADUATE COURSE"

(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

Problem No. 4 (Medical)

Presented by Dr. J. J. Bunn, Mt. Pleasant, N. C.

(See CLIN. MED. & SURGERY, Apr., 1935, p. 193)

RECAPITULATION: A man, 49 years old and weighing 230 pounds, who had no significant history except that he was a heavy eater and drank a good deal of alcohol, especially in the form of beer, and took little or no exercise, had an "attack" in November, 1934, in which, with a blood pressure of 190/100, he became dizzy and faint, with sweating and a rapid pulse (96), which was weak, and also nausea and vomiting, which relieved him somewhat. There was no pain nor any significant physical findings. He seemed to recover entirely.

In a second similar attack he had a moderate transient pain in his left shoulder; his pulse went to 120 and skipped occasional beats; there was a systolic murmur at the apex, and moderate tightness in the chest; on the third day his temperature, after a chill, went to 101°F. and on the fifth day, to 99°F.; there was slight dyspnea on exertion; heart not enlarged; apex beat not palpable; no edema; Wassermann reaction and urinalysis, negative.

Requirement: Suggest diagnosis and treatment. What was the cause of the chill and fever on the third and fifth days?

Discussion by Dr. E. C. Junger, Soldier, Ia.

This patient, thought only 49 years old, weighs 230 pounds, drinks plenty of liquor, eats three times as much as he needs and does not work. No wonder he feels dizzy, has "attacks," with a systolic blood pressure of 190 and a pulse which is not so strong!

My diagnosis is *coronary sclerosis*, with the same condition extending to the arch of the aorta, and possibly to the circle of Willis. The chills and fever are due to intestinal toxemia, poor liver function or mild myocarditis, or a combination of these.

Treatment: Glonoin (nitroglycerin) for the attacks; digitalis or strophanthus, with a cholagogue, regularly; an exclusive milk and fruit diet for some weeks or months; also no salt (or very little) in the diet, and no beer; golf or a ten-mile walk (worked up to gradually), every day.

If this man does not change his living habits very radically, he will not be here to vote for the next president.

Discussion by Dr. C. H. Kennedy, Fort Smith, Ark.

This looks like a fairly clear-cut case of gormandising, physical inertia, and possibly some damage to the liver by "spirits."

Although the patient's height was not mentioned, it is presumed that he is overweight, carrying an excess of fat to burden the heart. He has autointoxication from over eating.

These are usually difficult cases to handle, because they like their "eats" too well and will not give them up until definitely shown the necessity; and they usually have to be scared into compliance.

A long list of "forbidden" goods is frequently disconcerting to them; and a long list of "allowables" is confusing, so I usually tell them that they must give up just *three* things (that does not look bad to them). Then take them off of *sweets, starches* and *fats*, and, in this case, alcohols, if possible.

Not long ago I treated a very similar patient, who had tried before, with a formidable list of "allowables," and failed. I told him what *not* to eat, and he reduced from 202 to 170 pounds and now feels fine and has no trouble in remaining on the diet. His clinical findings were almost exactly like the case described, except the chills were not very severe, while the temperature was about the same.

Discussion by Dr. E. O. Houda, Tacoma, Wash.

The doctor's statement regarding his patient's business engagements, "where he hangs around and does very little," gives the unavoidable impression of a lazy individual—a "boss," who is overly fat and of a parasitic

disposition, whose chief interest is to eat and drink. However, particularly in the absence of any obvious lesions, one must consider the possibility of the early stages of some condition yet to develop.

Gormandism, to the degree of getting sick after eating, as seems to be the dominating feature of this case, may be accounted for by hyperinsulinism, which may be antecedent to a later lack of insulin and eventual development of diabetes. I believe it is more than coincidence that many diabetics were at some time quite proud of a digestion that could "digest nails," or gormands that just cannot resist the demand for food, which the hyperinsulinism of early islet disease creates. If the latter be true of this man, an apology is offered for the introductory accusation.

My suggestion is that his sugar metabolism be looked into for some time to come, or at least until something definite appears as to the true nature of his complaint.

Discussion by Dr. John Clark, Longton, Kans.

Here are the features of this case. He is a big eater and obese. He has hypertension and attacks with pale skin, weakness, vertigo and vomiting. The heart is seemingly enlarged, with irregular rhythm and dyspnea. He also has attacks of chills and fever.

Let us begin by asking some questions about this case. Is this obesity a disease? The history tells us that he is a big eater, lives in comfort and probably does not get proper exercise and is a heavy beer drinker. Any one of these conditions would upset his metabolism and would account for his fat. Therefore, I assume his obesity is not a disease.

The next question deals with his hypertension and the attending symptoms—the irregular heart, dyspnea, vertigo and vomiting. What does the hypertension signify? The history states that the hypertension is first up and then, under treatment, goes down. Evidently here is a heart that works under adverse conditions and is irregular.

Under hypertension there is a disturbance in the flow of blood in the arteries. This can happen from two causes: In one, like the obstruction to the flow of blood through the kidney, in nephrosis; in another there is a narrowing of the lumen of the vessel itself from some cause. In time the heart strain results in irregular rhythm, dyspnea and other later troubles, more remote, as a sequel to hypertension.

Vertigo is an upset of the body equilibrium, which is maintained by afferent impulses carried to the cerebellum from the skin, muscles, joints, eyes and semicircular canals of the ear. Vertigo can come with a disease of the cerebellum, but there is nothing in the history that points to that organ as diseased in this case. A disturbance of the lymph in the semicircular canals of the ear can cause vertigo, and hypertension can cause it in this way. So can toxic conditions. In this case we have both of these conditions, so that the vertigo is explained.

His vomiting gives us a clue. Vomiting gives him relief. He is a heavy eater. Then there are his toxic troubles. In a case of a heavy eater with the attending hypertension and heart signs we see here, vomiting goes along without further search.

Chills and fever can go along with almost every condition the doctor meets. Perhaps he suffered these attacks due to some indetermined infection, in no way related to the case in general; or they may be due to the hypertension, the heart symptoms and the other symptoms in general. I do not know.

He is a heavy beer drinker. This is the crux of this patient's complaints. Beer drinkers usually get fat. Obesity lays the foundation for his hypertension; and the hypertension for the enlarged, irregular heart with dyspnea. His vertigo and vomiting may be due to the alcohol. In gastric upsets of this nature, chills and fever are not an unusual finding.

My diagnosis is *chronic alcoholism*. My prognosis is bad. I have no suggestions to make as to treatment.

Discussion by Dr. Geo. B. Lake, Chicago

This is not a typical case of angina pectoris, because that condition is merely one of the symptoms which may occur in coronary thrombosis, but is not seen in all such cases.

This history strongly suggests a coronary accident—either spasm or thrombosis—as mentioned by Dr. Junger. An electrocardiogram would probably show an inverted T wave.

The chills and fever could easily be a part of this picture, or might be due to intestinal toxemia. These symptoms are of minor importance, in any case.

This history is incomplete without a report of more Wassermann tests. The case should be carefully studied for evidences of syphilis.

The main factor in a case like this is strict rest in bed for at least eight weeks. Something should be done about the obesity; and this might be a good time to scare the patient into a reasonable and sensible way of living.

Problem No. 6 (Medical)

Presented by Dr. F. H. Rhoades, Hanover, Kans.

ON July 2, 1933, a strong, 20-year-old girl suddenly developed diarrhea and abdominal cramps, with little or no fever. On July 7, when I first saw her, the temperature was 100°F.; pulse, 85; there was some abdominal distention and general tenderness,

(Continued on page 306)

CLINICAL NOTES and ABSTRACTS

Orchitis Parotidea

(A Case Report)

ORCHITIC involvement in mumps is quite common; but orchitic involvement alone, without any swelling of any of the salivary glands, is such a rarity that it assumes casuistic import.

About a year ago, while seeing a patient at her home, I was asked to look at her husband, who was sick in bed. I found him in acute pain, with a temperature of 102.2°F. and a marked cystic and very tender swelling of the right testis. The distention of the tunica vaginalis was so marked that the epididymis could not be made out. The left testis was normal.

The history of the case was as follows: A. L., white, 35 years old, married 5 years, 2 children (4 and 2 years old). The past history was essentially negative, but it was determined that the patient had never had mumps. Venereal infection of any type was denied and there was absolutely no evidence of any venereal disease at the time I saw the patient.

The present history dated back three days, when the man thought he was developing a cold, because he felt feverish and indisposed. A day later he felt some discomfort in the right testicle. This became worse and the organ started to swell and then became so painful that, on the following day, the patient was obliged to stay in bed. An ice-bag was applied, but the swelling and pain became steadily worse.

Since the lesion did not seem characteristic for tuberculosis, syphilis or gonorrhea and all trauma was denied, I thought of the possibility of mumps and, on questioning, learned that the two children of the patient's sister, whom he had visited several times during the last two or three weeks, both had mumps.

The patient was kept in bed, given a mild cathartic and put on a fluid diet. The scrotum was supported by adhesive tape and the continued application of an ice-bag advised.

Laboratory examinations of the urine were negative. A blood count showed a mild leukocytosis (11,000), with 40 percent of lymphocytes.

In the next three or four days the swelling gradually subsided and the pain decreased; the temperature also returned to normal. There was still some tenderness of the testis on palpation. The epididymis was found not to be involved. A check-up after two weeks showed no abnormalities remaining. A Wassermann blood test was negative. No evidence of genital or pulmonary tuberculosis was found.

Two weeks after the man's illness, his 4-year-old daughter developed typical parotitis.

Since Bieberbach and Vibber (*J. A. M. A.*, Apr. 8, 1933, Vol. 100, No. 4, p. 1092) have gone into the pathologic changes found in orchitis parotidea, it seems to me unnecessary to add anything to this purely clinical report of an unusual case, except to state that, 9 months later, the patient was well but had a moderate atrophy of the right testis. The left was normal.

The facts presented in this paper, especially the contact with mumps before the illness and the infection of the daughter with the same disease afterward, together with the symptoms and signs described, seem to warrant the title of this paper.

GERARD L. MOENCH, M.D., F.A.C.S.
New York City.

Treatment of Phenol Poisoning With Methylene-Blue*

MISS O. M. was admitted to the Ohio Valley General Hospital at 10:50 P.M., having attempted suicide, at 10:00 P.M., by drinking 30 cc. of pure phenol, well diluted with water. The patient was *in extremis*.

Immediate antidotal treatment was instituted. Saline and egg albumen lavage was followed by 50-percent alcohol lavage. The lavage was begun at 11:20 P.M., and finally discontinued at 5 A.M. Epinephrin and caffeine stimulation was induced. Five-percent dextrose and saline solution was administered, intravenously, for twelve hours. At 11:30 P.M. (forty minutes after admission) 40 cc. of methylene-blue (methylthionine hydrochloride), 1-percent solution, was given intravenously.

The administration of methylene-blue was apparently of value in the treatment of the grave chemical toxemia. The drug was exhibited on an entirely empiric basis. It is possible that the dye may have acted as a detoxifying agent, fixing the soluble phenol, with the production of a non-toxic compound.

If this is true, an agent is at hand which exerts its effect subsequent to absorption of

**Military Surgeon*, Jan., 1935.

the phenol from the stomach. Such an antidote would be of the utmost value, as all other therapeutic agents heretofore employed in this form of poisoning have depended upon the neutralization and mechanical evacuation of the material in the stomach. On the seventh day the patient was up and was subsequently discharged.

WM. M. SHEPPE, M.D.,
1ST. LIEUT. MED. RES., U. S. ARMY.

Reliable Spinal Block Analgesia*

COMPLETE muscle relaxation, constriction of the small bowel, rapid return of normal body functions, and low incidence of operative shock and of post-anesthetic complications, are generally appreciated as being the advantageous characteristics of spinal block analgesia over other forms of anesthesia. Nevertheless, spinal anesthesia has been rejected completely by surgeons or anesthetists in many medical centers, which is unfortunate, inasmuch as spinal block can and should form an important component of the anesthetist's armamentarium.

The objections to this procedure are practically limited to two: (1) severe collapse; and (2) inconsistency of the anesthesia. The collapse may possibly be explained by the effect of the anesthetic agent in producing paralysis of the vital centers in the fourth ventricle, or by the fact that certain patients do not tolerate with ease alterations of blood pressure. The inconsistency of the anesthetic is probably troublesome to a number of surgeons, when this anesthetic is so administered that the operator will be uncertain as to the duration of the anesthesia.

Spinal block is indicated in all operations below the diaphragm, in patients considered to be first-class surgical risks. It is not especially suited to patients in poor physical condition, or those presenting definite anemia, collapse, cardiac deficiency, low blood volume, essential hypertension, general debility, advanced senility and the existence of spinal cord lesions.

I have experienced three disappointing results, in a series of 1,600 administrations of spinal anesthesia. In each of them obstructive jaundice was present.

Routinely 3 grains (0.2 Gm.) of Nembutal is administered one hour before operation, and either 1/3 grain (21 mg.) of Pantopon or 1/200 grain (0.32 mg.) of hyoscine, hypodermically, one-half hour later. I follow the usual routine of administration and technic of injecting procaine, using from 100 to 300 mg. of the drug, according to the duration of the anesthesia desired. Following this procedure the patient is placed on his back and at once tilted 8 to 10 degrees toward a Trendelenburg position. It is probably advisable not to use a full Trendelenburg position within 12 to 15 minutes, as this procedure might have a tendency toward an unnecessarily high analgesia. It is also my practice to administer ½ grain (32 mg.) of ephedrine as soon as the spinal injection has been completed, in anticipation of a drop of the systolic blood pressure.

Nausea on the operating table is very rare, though it does usually occur in epigastric operations, during the initial tugging on the stomach or gallbladder. However, gas-oxygen anesthesia, from time to time, will tend to overcome this.

Stovaine analgesia is used wherever a "saddle area" anesthetic is desired, and may be used in rectal, perineal or cervical surgery and for cystoscopic and proctoscopic procedures. As a rule, 1.5 cc. of stovaine solution is used. This gives good analgesia for from 45 to 75 minutes. In more than 100 cases, the use of Spinocaine has not proved dependably satisfactory.

B. C. LEECH, M.D.

Regina, Sask., Can.

*Canad. M. A. J., Oct., 1934.

Little Danger from Barbiturates and Coal-Tar Derivatives*

THE coal-tar derivatives provide an insignificant number of cases of "addiction" or "poisoning," and, admittedly, the cases called "addiction" were not true addiction, and the cases of "poisoning" not true poisoning. They are likewise rarely the cause of death.

The coal-tar derivatives do not present serious problems. They are in no sense dangerous drugs.

The barbiturates present a distinct problem, entirely different from that of the coal-tar derivatives, and should be classified and studied separately.

The untoward action of coal-tar products and barbiturates was due either to overdosage or idiosyncrasy. Overdosage is more than idiosyncrasy, and this especially applies to the barbiturates which are frequently taken with suicidal intent. In physiologic doses, neither series is harmful to normal persons.

None of these drugs is a significant cause of death, as is proved by statistics. Ten deaths from opiates and barbital derivatives in the whole state of Massachusetts for 1929, and not a single death from acetanilid or allied coal-tar derivatives speaks well for the latter.

When it is remembered that thousands turn to the coal-tar preparations daily for relief from pain, their comparative innocuousness is self-evident. It would be unfair to deprive people of these drugs, which are probably of more benefit and add more to comfort and happiness than any group of drugs yet dis-

*Canad. M. A. Journ.. 31:638, 1934.

covered, and yet are, at the same time, relatively free from any ill effects.

OTTO LOWY, M.D.

Newark, N. J.

An Obstetric Ring for Artificial Puncture of the Membranes*

ARTIFICIAL puncture of the membranes is the simplest of obstetric operations. When one observes the awkwardness with which the operation is performed by inexperienced physicians and the amount of unnecessary trauma sometimes inflicted in attempting to rupture the membranes, the need for a simple, effective and harmless instrument becomes obvious.

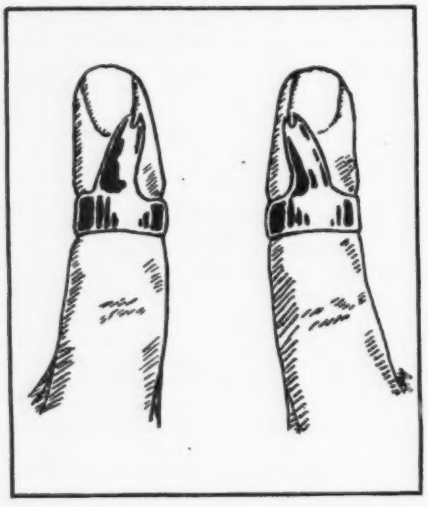


Fig. 1.—Obstetric rings for fingers of right or left hand.

The ring that I have devised is made of malleable metal, so that it can be fitted to the gloved forefinger just behind the first joint. A rigid, notched projection extends along the dorsum of the first phalanx, with the point directed to the inner aspect of the fingernail. When the finger is introduced into the vagina, the projection lies flat against the gloved finger, so that no trauma is inflicted on the mucous membrane of the vagina or on the cervix. Examination of the cervix and of the presenting parts may be made by means of the palmar surface or the tip of the finger, and when puncture of the membranes is indicated the finger is bent slightly, releasing the notched projection. The puncture is readily accomplished by rotating the finger mediad. The finger is again straightened and further examination of the presenting parts may be made to verify the position and to feel for a prolapsed cord, an extremity, and so on. Furthermore, the finger is in a favorable position to control the rate of escape of the liquor.

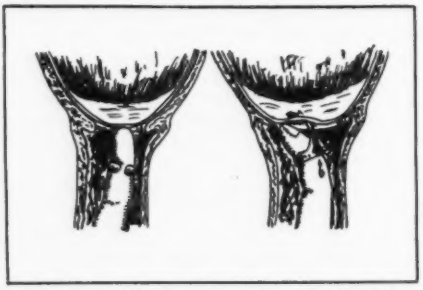


Fig. 2.—A, palpation of bag of waters with palmar surface of finger; B, method of rupturing bag of waters with author's instrument, by bending and rotating finger.

The obstetric ring here described may be worn for every vaginal examination, whether or not it is needed. It is light in weight and does not interfere with the vaginal touch or cause trauma. Thus the necessity of a second insertion of the finger or of an instrument is obviated if a decision is made to puncture the bag of forewaters. The obstetric ring has been tested in the Michael Reese Hospital maternity for several months, during which time it has been employed by members of the attending and house staffs, with entire satisfaction. It may be obtained for use on either the right or the left hand, according to the habit of the individual physician[1].

IRVING F. STEIN, M.D.

Chicago, Illinois.

*J. A. M. A., Feb. 9, 1935.

Camirol in Respiratory Diseases*

CAMIROL, which is a compound of terpin hydrate, iodine salts, menthol and camphor, in oil of sweet almonds, exerts, when injected intramuscularly, a strong phagocyte-stimulating action, as well as being alterative, antiseptic, diaphoretic and expectorant. It is particularly destructive to tubercle bacilli.

In early tuberculosis, 1 cc. should be injected intramuscularly (preferably in the buttock) every other day up to 15 doses, and then every third day to 40 doses. After a rest period of two weeks or more, the course can be repeated, if indicated and if the preparation has caused no ill effects. The results in these cases have been gratifying.

This preparation has also been used, with good effect, in cases of influenza, bronchitis, pneumonia and other respiratory infections, the dose being 1 cc., intramuscularly, repeated every 8 to 24 hours, as indicated by the patient's condition.

*Med. Rec., Feb. 6, 1935.

1.—Manufactured by Sharp and Smith, Chicago.

This procedure is safe, simple and efficacious, but should be used only after a careful study of each case, and not as a routine measure.

ARCH. E. OLPP, M.D.
Union City, N. J.

Pyridium in Urethritis*

LABORATORY studies of the gonococcus indicate that gonorrhea should be amenable to treatment with almost any sort of antiseptic. The gonococcus is a delicate organism, sensitive to temperature changes and desiccation.

In the body the gonococcus has a tendency to penetrate quickly to parts not easily accessible to antiseptics. Most antiseptics, supposedly, produce their deleterious effects upon the gonococcus by coagulating its albumin. Such antiseptics lose part of their effectiveness through combining with tissue albumin and, by building up a wall of devitalized tissue ahead of them, limit their own penetration into the tissues. Because of this, an antiseptic capable of tissue penetration, without damage, has long been needed.

In recent years, a new class of antiseptics has been developed. These are the dye antiseptics. They produce their deleterious effect upon the gonococcus by an intense staining, which interferes with the vital cell processes of the organism. These antiseptics do not coagulate albumin. The antiseptic dyes have a greater affinity for vegetable matter than for animal tissue.

One of these antiseptic dyes was selected for trial in the treatment of a series of gonorrhea cases in the male. The dye selected, pyridium, is chemically phenylazo-alphadiamino-pyridine hydrochloride. When it is given internally, it appears in the urine in from 45 to 60 minutes, staining it a reddish-orange. This dye chemical is very low in toxicity and is practically always well tolerated. The preparations of the chemical used in this investigation were the 0.1 Gm., sugar-coated tablets for oral administration and the 1-percent solution and its dilutions, used locally.

During the acute stage, when many of the cases evidence discomforting symptoms, such as urgency, frequency, burning or irritation, two 0.1 Gm. tablets of pyridium were given orally, three times a day. It seemed to be practical, after the symptoms were reduced and the patient made comfortable, which was usually in not more than two or three days, to reduce the dose to one 0.1 Gm. tablet, t.i.d., if this was enough to maintain a deeply colored urine. This dose then was usually carried along until treatment was completed. In some cases, however, it was found necessary to increase the dose again to two 0.1 Gm. tablets, t.i.d., in order to maintain the desired intense staining quality of the urine. A few cases required 3 tablets, t.i.d.

In 50 of the 77 cases treated with pyridium orally, the chemical was also used locally. The 1-percent solution was diluted to 1:4,000 to 1:1,000 for office irrigations; and to 1:400 to 1:200 for hand syringe injections at home, always starting with the weaker solutions. In some cases the office irrigations were given daily, and later cut down to 2 or 3 weekly. The hand syringe injections varied from 3 or 4 daily to 2 daily in the later stages.

A drug to be efficient in the treatment of gonorrhea should have the following properties: (1) Antiseptic; (2) astringent; (3) penetrating; (4) stimulating. The pyridium-treated cases here reported needed no socalled "after treatment" to get rid of shreds, desquamation and debris, therefore it may be clinically assumed that it fulfills all of the four requisites specified above and is, therefore, the best single-drug treatment for gonorrhea, if used intelligently and in cases that plainly show specific indication for its use.

It is quite evident, judging from the clinical effects obtained in this series of cases, that pyridium is a valuable therapeutic agent.

MAURICE B. WOLFF, M.D.
Chicago, Ill.

*Ill. M. J., Feb., 1935.

The Treatment of Gonorrhea

A RECENT article in CLINICAL MEDICINE AND SURGERY (Dec., 1934, p. 568) gave a very comprehensive and lucid description of the course of acute gonorrhea, and its treatment. I wish to disagree with the author in regard to the treatment of the condition.

Silver-protein therapy was the customary medication nearly thirty years ago, when I first began practice, and surely some improvement has been made since that time. The gonococcus is extremely resistant to silver protein solutions, and potassium permanganate is innocuous. Frequently the gonococcus is found in smears from the urethra after six months of continuous use of a silver protein.

The mere passing of an antiseptic through the urethra would have no beneficial effect, as the urethra is in folds, and for the solution to come in contact with all of the urethral mucous membrane, the urethra must be dilated to its fullest extent, under pressure, so that no organisms are concealed by its folds. This pressure is obtained with a two-dram piston syringe, the fluid being injected quickly and forcibly and then retained, under pressure, for from one to three minutes. On being released the fluid is ejected some distance, showing that it was under the required pressure. At least four injections must be given or taken daily and, if possible, five.

Gonorrhea, like most diseases, is self limited, the anti-bodies developed in the blood gaining ascendency over the toxins and the disease disappearing in the course of about eighteen months, even in the absence of all treatment. At the onset, the disease is confined to the anterior urethra, and only through injudicious treatment or carelessness on the part of the patient does it become more extensive.

Complications are usually due to irrigations, faulty injections, continued sexual intercourse and over-indulgence in alcoholic liquor. Most complications, particularly posterior urethritis, occur in patients who fail to begin treatment in the first week of the disease.

Metaphen (Abbott), in a strength of 1:4,000, will kill the gonococcus. In cases where the infecting organism is resistant to ordinary methods of treatment, the intramuscular injection of a foreign protein assists very materially in getting a good result.

Many preparations are recommended for epididymitis, but it is best treated with an intravenous injection of sodium iodide, 31 grains (2 Gm.) in a 10 cc. ampule, every second day for four doses. The temperature falls to normal after the first dose; and after the third the swelling and tenderness disappear.

R. Stewart MacArthur, M.D., C.M.
Los Angeles, Calif.

Look for THE LEISURE HOUR among the advertising pages at the back.

Acetanilid*

ACETANILID, introduced in therapeutics in 1889, was and is a useful drug.

Reports of its alleged toxicity appear to have been handed down and accepted uncritically. Leading pharmacologists and therapeutists, in their published work, do not agree with these reports. A careful study of the animal tests on which claims of toxicity are based shows that they were improperly made and that, in some instances, the conclusions drawn are faulty. Study of most of the recorded clinical cases shows that untoward symptoms are due to abuse, heavy overdosage, or prolonged and excessive use, not to use in proper therapeutic doses.

It is concluded that acetanilid, in proper therapeutic doses (grains 2 to 3), is a safe and useful drug, particularly interesting at this time by reason of its economy, as compared with many other sedatives.

Lucius Felix Herz, Ph.B., M.D.
New York City.

*Internat. J. Med. & Surg., Feb., 1934.

Gold in Medicine*

GOLD had been used for ages in the treatment of disease. Its unscientific and indiscriminate use in many and diverse diseases led to its being, at times, discredited and consigned to the heap of discarded drugs.

With a better understanding of the pharmacologic action and the therapeutic effect of some of the gold salts, they are now being employed in the treatment of certain diseases, with encouraging results. Gold tribromide has been prescribed since the end of the nineteenth century, in the treatment of minor epilepsy, spasmodic disorders and in neuroses. My own studies in a large number of children, extending over a period of years, show convincingly that it is of definite therapeutic value in the treatment of pertussis.

J. Epstein, M.D.
New York City.

The Advertisements are NEWS! Read and use them.

The Seminar

(Continued from page 301)

slight cramps, and the diarrhea still continued (10 to 15 stools in 24 hours).

The condition developed into a typical picture of typhoid, and the fever continued for six weeks, though the Widal test was negative. She had a stormy time, including four serious intestinal hemorrhages, which were controlled by opiates and bismuth, and deep ulcerations in the mouth.

After she had had a normal temperature and urine for several weeks and was up and about, the fever and abdominal distention slowly returned, and on Oct. 11, 1933, she had a severe chill, followed by a temperature of 103°F. and pain and swelling in the left leg and groin, which proved to be phlebitis. When this subsided, she still had abdominal distention, constant moderate fever and diarrhea.

Other physicians who saw this patient in consultation suggested abdominal tuberculosis and sprue, but neither of these was conclusively demonstrated.

Laboratory examinations: The *stool* showed a few pus cells, but no blood, parasites nor ova.

The *blood* showed a negative Wassermann reaction; red cells, 2,390,000; leukocytes, from 5,300 to 10,400; hemoglobin, 55 percent.

Requirement: Suggest diagnosis and treatment, giving reasons. What further studies should be made to clear up the diagnosis?

*Med. Rec., Jan. 16, 1935.

DIAGNOSTIC POINTERS

Vitamin A Deficiency

WHILE vitamin A deficiency is generally first apparent in the eyes, the earliest symptoms are not infrequently seen in the integument, consisting of keratinization, with a dry, scaly skin; comedones; a reduction of sweating; and dry, brittle nails. In addition the patient may be pale, apathetic and easily fatigued. An increase in the vitamin A intake will promptly relieve the symptoms in such cases.—DR. G. P. GOODWIN, in *Brit. M. J.*, July 31, 1934.

Nephritis and Pregnancy

ONE of the most serious, and often unrecognized or neglected, complications of pregnancy, is an underlying nephritis. Approximately one-quarter of our maternal death rate is due to the toxemias of pregnancy. Nephritis or nephritic toxemia has been regarded as one of the toxemias of pregnancy.—DRS. K. KUDER and H. J. STANDER, in *N. Y. St. J. of M.*, Jan., 1934.

Endocrine Factors in Various Diseases

WORRY, fear, anger, excitement—the same factors which stimulate the adrenals—aggravate diabetes, increase blood sugar, sometimes to the point of glycosuria in presumably normal persons, and raise blood pressure. Female diabetics with ovarian insufficiency have an improved carbohydrate tolerance when their ovarian insufficiency is corrected.—DR. JAMES H. HUTTON, in *Ill. St. M. J.*, Dec., 1933.

Duodenojejunal Ileus Simulating Gastric Crises of Tabes

THE third portion of the duodenum lies between the spine and the root of the mesentery, and may be compressed, causing symptoms of obstruction, by any drag on the mesentery. Attacks may be acute, with nausea and vomiting and agonizing, tearing pain, relieved only by morphine, with complete freedom between attacks, much like the gastric crises of tabes. There is *no headache*. Milder cases show attacks of epigastric pain, pyrosis and burning, often at night and sometimes almost continuous, but with no headache.

The treatment is by duodenojejunostomy.—DR. RALPH C. BROWN, Rush Medical College, Chicago, before I. P. G. M. A.

Symptoms of Vitamin C Deficiency

THE indications suggesting a deficiency of vitamin C in the diet are:

1.—Scurvy symptoms—skin hemorrhages, due to weakened capillaries; pyorrhea; loose teeth; decalcification of bones; susceptibility to dental caries.

2.—Imparied adrenal and thyroid function, with consequent cardiac and vascular disease.

3.—Anemia, due to impaired iron metabolism.

4.—Stomach and duodenal ulcers, vitamin C being essential to the normal secretion of gastric mucin.—*Vitamin News*, Apr. 15, 1935.

Diabetes Insipidus and the Pituitary

THE intermediate lobe of the pituitary gland secretes a hormone, or a mixture of hormones, known as vasopressin, which exerts two very characteristic pharmacologic effects: vasoconstriction and postponement of the excretion of water, but not salt, through the kidneys. The effect of lack of this hormone, or at least of its antidiuretic moiety, is seen clinically in the picture of diabetes insipidus. —*The Lancet* (Lond.), Sept. 1, 1934.

Bacterial Allergy

THE human body can become sensitized to bacteria and their products, just as it can to foods, pollens and other foreign proteins, with the production of typical allergic diseases, such as asthma, hay fever, urticaria, eczema, etc. Bacterial allergy may be suspected from the history and confirmed by skin tests with bacterial proteins or autogenous or stock vaccines.—GRAFTON TYLER BROWN, M.D., F.A.C.P., in *South. M. J.*, Oct., 1934.

Curability of Carcinoma

IN early carcinoma, the percentage of recovery, in properly treated cases, is high. Even in carcinoma of the stomach requiring extensive resection, 25 percent of operable cases live five years or more; and with cancer of the colon this percentage is 34.—DR. E. STARR JUDD, Mayo Clinic, Rochester, Minn.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE AND SURGERY, Medical & Dental Arts Bldg., Waukegan, Ill., is accompanied by a check for the published price of the book.

A library is not a luxury, but one of the necessities of life.—BEECHER.

Harnes: Syphilis

CLINICAL MANAGEMENT OF SYPHILIS. *By Alvin Russell Harnes, M.D., Chief of Congenital Luetic Clinic, New York Hospital. New York: The Macmillan Company. 1935. Price, $1.50.*

In the big clinics, the treatment of syphilis is highly standardized, but the average general clinician who handles these cases (and more of them ought to be handled in this way) has, hitherto, lacked a complete and well-thought-out routine schedule for their management, and so has frequently failed to deal with them adequately.

That handicap is removed by this thin but meaty volume of 70 pages, which outlines the day-by-day and week-by-week treatment of all forms of syphilis, by all the ordinarily-used methods, for a period of three years. Preceding each chapter is a brief explanation of the reasons for the treatment recommended; and following each chapter is a table showing what to give and when and how to give it, during the entire treatment of the case. Technics are fully explained and illustrated with instructive line drawings.

With this book as a guide, and a little practice, any general practitioner can treat syphilis as well as it is treated in the large clinics, and thus keep the management of his cases in his own hands, to his vast professional and economic advantage.

The price of the volume is so small that no practicing physician can afford to be without it.

Hinman: Urology

THE PRINCIPLES AND PRACTICE OF UROLOGY. *By Frank Hinman, A.B., Leland Stanford Junior University, M.D. Johns Hopkins Medical School, Clinical Professor of Urology at the University of California Medical School. With 513 Illustrations and 48 Tables. Philadelphia and London: W. B. Saunders Company. 1935. Price, $10.00.*

The practice of urology is highly technical, and to become a master requires years of special training, which are beyond the scope of the average clinician, who must have, as a minimum, sufficient knowledge to recognize a urologic case when he sees it, so that he can treat it himself or know whether the specialist is doing the proper things.

This excellent, one-volume textbook succeeds in embodying all the information on this subject which is likely to be required by any medical student or general practitioner, as well as much that will be of great interest and practical value to the specializing urologist.

The paper, typography and binding are of high quality. The literary style is easy and pleasing. The illustrations (of which there are 513) are exceptionally illuminating and helpful. The index is ample.

The non-specializing physician who has this volume in his library will need no other work on urology for several years to come; and if he studies it and makes use of the knowledge so obtained, he will be a better all-around doctor.

Clendening: Clinical Treatment

METHODS OF TREATMENT. *By Logan Clendening, M.D., Clinical Professor of Medicine, Medical Department of the University of Kansas; Attending Physician, Kansas City General Hospital; Physician to St. Luke's Hospital, Kansas City, Missouri. Fifth Edition. St. Louis, Missouri: The C. V. Mosby Company. 1935. Price, $10.00.*

Between these covers, the author has gathered together a large variety of material, otherwise widely scattered in the medical literature, dealing with the actual clinical treatment of disease in the field of internal medicine. The omission of all material dealing with etiology, pathology, diagnosis, etc., gives an opportunity to discuss therapeutic measures fully and in detail. Here will be found complete instructions for the employment not only of drugs, but of remedial measures of all sorts—diet, physical therapy, spinal puncture, blood transfusion, etc. All methods are described so clearly and minutely that any physician could carry them out from the description alone.

The first part of the book considers each procedure, under such headings as drugs, diet, hydrotherapy, etc. The second part considers the application of the methods, the results to be expected, etc., under the heading of various diseases. In this manner no method of treatment needs to be discussed more than once, and is merely referred to under the various diseases in which it is applicable.

Dr. Clendening's clarity and facility in writing are so well known as to need no extended comment, and this work is no exception to the rule. It is not only highly practical and

informative, but also easy and pleasant reading.

The aim of medical practice is the relief and cure of disease; and while the importance of diagnosis can scarcely be overestimated, it is sterile and academic if it does not lead to adequate treatment.

No physician who actually cares for sick people can afford to deny himself and his patients the genuine and readily available help which this book will place at his disposal. It should be kept within reach at all times.

Medical Progress

REVIEW OF MEDICAL PROGRESS. 1934. *By George Morris Piersol, B.S., M.D., Editor-in-Chief, and Edward L. Bortz, A.B., M.D., Assistant Editor. With 112 Illustrations. F. A. Davis Company, Philadelphia, Pennsylvania. Price, $10.00.*

It is obviously impossible for any one man to read the vast mass of periodical medical literature, much of which is highly specialistic in character, so that the average practitioner will find it dry pabulum. There is, however, a large amount of new material in which all physicians will find vital interest.

The contributors to this volume have combed the literature of their specialties in search of material which will be of practical assistance to the general clinician, and have arranged it in alphabetical order, for easy reference. Special attention has been given to therapeutics and to new and improved methods in all fields of medical practice. The professional standing of the various contributors is a guarantee of the authenticity and sincerity of the material presented.

In typography, format and binding, this is a beautiful piece of book-work, so that it will be a pleasure, as well as profitable, to consult the work frequently. Busy physicians, who aspire to keep abreast of their profession, will find it a great time saver.

Davis: Advance of Science

THE ADVANCE OF SCIENCE. *Edited by Watson Davis, Director, Science Service, Washington. Garden City, New York: Doubleday, Doran & Company. 1934. Price, $3.50.*

For good or ill, the limits of human knowledge are expanding daily and leading us toward a new way of living which we can sense, but not predict. A reasonably complete record of recent advances on all fronts of knowledge is presented in this volume, in which the signposts of the future will be found.

This record does not pretend to be exhaustive nor to fulfill the needs of the specialist. It is intended for the layman in general science, who wants to be told, in ordinary language, what science has done and attempted and what effects these advances in human knowledge are likely to have upon his daily life.

No physician who aspires to success and leadership can afford to be ignorant of the advances which have been made along these lines during the past generation, and there are few, if any, books which will supply him with this information in as clear, compact and fascinating a form as this one. Here is a valuable addition to the library of any thinker.

Worcester: Care of the Aged, the Dying and the Dead

THE CARE OF THE AGED, THE DYING AND THE DEAD. *By Alfred Worcester, M.D., Sc.D., Henry K. Oliver Professor of Hygiene, Harvard University. Springfield, Ill., and Baltimore, Md.: Charles C. Thomas. 1935. Price, $1.00.*

The science of medicine has well-nigh displaced its art, in the minds of many of its younger votaries, and this is a great loss to the physician, and especially to his patients.

Old people and those who are dying are, too often, shamefully neglected by those who call themselves their medical advisers and attendants.

Here are three masterly and beautiful lectures on three subjects of vast importance, which are all but forgotten today. Every medical student should be required to pass an examination on the contents of this little book, and every practicing physician should read it once a year, at least. By doing so, and by following the advice given, he would so endear himself to his patients and their families that mass-production medicine, on a mechanical basis, would have no chance whatever. The small price of the book gives no indication of its real and immense value.

Chideckel: Abnormalities of Sex

FEMALE SEX PERVERSION. The Sexually Aberrated Woman as She Is. *By Maurice Chideckel, M.D. With a Foreword by Dr. S. Wolman, Associate in Medicine at Johns Hopkins University. New York: Eugenics Publishing Company. 1935. Price $6.00.*

Deviations of the sex instinct are manifestations of a disturbed mentality, and the sooner people, especially physicians, come to understand this fully, the sooner they will get rid of their fanatical and barbarous attitude toward those who are thus diseased. The so-called sex pervert is, in many cases, no more responsible for or able to control that condition than is the person with a case of influenza or appendicitis.

In this book will be found serious discussions of the various abnormal sexual practices indulged in by American women—homosexuality, masochism, narcissism, autoerotism, kleptomania, etc.—with explanations of how these conditions originate (usually through the ignorance, bigotry or carelessness of parents), operate and may be cured. It is a sane and enlightening presentation, which should be of real and practical value to all physicians who have to deal with female patients, because it will give them the understanding and sympathy to deal with many distressing cases which would otherwise be quite inaccessible. It is interesting to note that the author classifies a passionate fondness for reading pornographic literature as a sexual perversion.

The fallacy, that unusual sex practices are

a common cause of insanity, is thoroughly exploded, and this should help in reassuring and rehabilitating many who are on the verge of a psychosis, not because of such practices, but from fear of their supposed results.

The volume is a beautiful piece of bookmaking. The binding is imitation pigskin and the paper and typography are unusually pleasing.

Joll & Ledlie: Surgery

AIDS TO SURGERY. *By Cecil A. Joll, M.S. (Lond.), M.D. (Bris.), B.Sc. (Lond.), F.R.C.S. (Eng.), Senior Surgeon and Lecturer on Surgery to the Royal Free Hospital; Senior Surgeon to the Miller General Hospital; Surgeon to the Cancer Hospital; Consulting Surgeon to the Royal Bucks Hospital; Etc., and Reginald C. B. Ledlie, M.B., B.S. (Lond.), F.R.C.S. (Eng.), Surgeon to the Miller General Hospital; Surgeon to the East Ham Memorial Hospital; Associate Assistant Surgeon to the Cancer Hospital; Etc. Illustrated by H. H. Greenwood, M.B., B.S. (Lond.), F.R.C.S. (Eng.), Consulting Surgeon, G. W. R. Hospital, Swindon. Sixth Edition. Baltimore, Md.: William Wood & Company. 1935. Price, $2.75.*

The sixth edition of this little book has been rewritten and considerably enlarged and a number of helpful line drawings have been introduced. It is still much less than a text book, but rather more than a quiz compend, because the surgical conditions commonly met with by general practitioners are dealt with in some detail.

The small size of the volume (6½x4x1 inches) makes it handy for the pocket or bag, for study at odd moments or for reference in a bedside emergency; and it will be very helpful to those preparing for examinations or brushing up their surgical knowledge. The paper and typography are unusually good for so small a book and the material is well presented.

Freud: Psycho-Analysis

PSYCHO-ANALYSIS FOR TEACHERS AND PARENTS. Introductory Lectures. *By Anna Freud. Translated by Barbara Low, Author of "Psycho-Analysis: An Outline of the Freudian Theory." New York: Emerson Books, Inc. 1935. Price, $1.75.*

Designated especially for the practical use of parents and teachers, this little volume, with its clear, concise statement of scientific principles, should be available to all those who come in close contact with children. Anna Freud's non-technical, simple, straightforward presentation of Freudian principles, as given here, is based on four lectures given by her before Vienna teachers, and thus is directly designed to meet lay needs.

To better interpret what seems enigmatic in child behavior, the author here outlines three periods in child life and shows how each has its own characteristic emotional reactions, upon the proper appraisal of which progress in life adjustments and education are dependent. With a background on which the threefold nature of the child personality is reflected, the reader is led to see vividly the relation between what a child wants to do, what he can do, and the importance of the ever-present clash between intentions and actions. The bad, naughty habits of the tiny child are seen as normal links in a long chain of development toward adulthood.

Physicians who are confronted with the pathologic side of psychologic processes in children will wish to recommend this book to parents, that there may be more intelligent cooperation when behavior problems need sympathetic interpretation in medical procedure.

A. M. N.

Groedel: Electrocardiography

DAS EXTREMITATEN-, THORAX- UND PARTIAL-ELEKTROKARDIOGRAMM DES MENSCHEN. Eine vergleichende Studie. (The Electrocardiogram of the Extremities, Thorax, and the Partial Electrocardiogram of Man. A Comparative Study.) *By Professor Dr. Franz Maximilian Groedel, Director of the William G. Kerckhoff Institute for Cardiac Research in Bad Nauheim. Two Volumes. Volume I: Text with 334 illustrations. Volume II: Atlas with 200 Plates. 358 and 200 pages. Leipsic: Theodor Steinkopf. 1934. Price, 25 Marks.*

This is a masterly work by a master cardiologist. Professor Groedel is too well known as one of the greatest heart specialists in the world to need any introduction. He now temporarily practices in New York as a consultant in cardiology, having devoted years to special research and having studied countless cases in his sanatorium in Bad Nauheim.

Judiciously studied, the present two volumes are the best that has been offered in the literature. The author has succeeded in isolating the electrocardiogram of the left and the right heart and in representing the so-called partial electrocardiogram, not only on animals but on human beings—a method of tremendous clinical value.

The atlas contains photographic reproductions of nearly a thousand graphs by a special process devised by the author, which has yielded brilliant pictures. It is hoped that some enterprising American publisher will bring out a translation. Meanwhile all who can read medical German should not fail to study this masterly work.

G. M. B.

Guy: Hydrochloric Acid

HYDROCHLORIC ACID AND MINERAL THERAPY. *By Walter Bryant Guy, M.D., St. Augustine, Florida. Philadelphia: W. Roy Huntsman. 1934. Price, $2.00.*

This small volume, which is rather incomplete, carelessly written and highly unconventional in its viewpoint is, none the less decidedly thought-stimulating and worth reading (it can be read in an hour), even though one does not agree with the author.

The main thesis here presented is that lymph stasis, tissue alkalosis and potassium deficiency are at the basis of most of the socalled degenerative diseases, and that these conditions can be corrected and the resulting

morbid processes ameliorated by the oral, intramuscular or intravenous administration of hydrochloric acid, especially if it is combined with salts of potassium and, possibly, silicic acid.

The author states that he has written the book for general clinicians; and certainly there is no highly technical material in it, but chiefly direct suggestions for the treatment of patients, with rather simple statements of the philosophy of such treatment. The ideas are worth trying, even if one cannot accept the philosophy unreservedly.

Harvey Lectures

THE HARVEY LECTURES. Delivered under the Auspices of the Harvey Society of New York. 1933-1934. Under the Patronage of the New York Academy of Medicine. *By Drs. R. E. Dyer, W. Mansfield Clark, Ross G. Harrison, E. A. Doisy, Evarts A. Graham, George L. Streeter, Thomas M. Rivers, Detlev W. Bronk. Series XXIX. Baltimore, Md.: The Williams & Wilkins Company. Price, $4.00.*

The twenty-ninth series of lectures before the Harvey Society for the Diffusion of Knowledge of the Medical Sciences is collected in this volume.

The lectures included are: Typhus in the United States, by Dr. R. E. Dyer; Oxidation-Reduction Systems, by Dr. W. M. Clark; Heteroplastic Grafting in Embryology, by Dr. Ross G. Harrison; Estrogenic Substances, by Dr. E. A. Doisy; The Biliary Tract and Pancreas, by Dr. Evarts A. Graham; Morbid Processes in the Fetus, by Dr. G. L. Streeter; Filterable Viruses: Psitticosis, by Dr. T. M. Rivers; and Nervous Mechanisms of Cardio-Vascular Control, by Dr. D. W. Bronk.

While not of the highest practical value to busy general clinicians, the Harvey Lectures are a valuable addition to the library of any deep student of medicine.

Woodwark: Internal Medicine

MANUAL OF MEDICINE. *By Sir Stanley Woodwark, C.M.G., C.B.E., M.D., F.R.C.P., Physician and Lecturer on Medicine, Westminster Hospital; Senior Physician to the Royal Waterloo Hospital, etc.; Examiner in Medicine to the Conjoint Board, The Society of Apothecaries and General Nursing Council; Formerly Dean of the Westminster Hospital Medical School (14 years); Colonel A.M.S., Consulting Physician to the Forces and Deputy Assistant Director-General; etc. Fourth Edition. Oxford University Press, London: Humphrey Milford. 1935. Price, $5.00.*

This small volume is not intended to replace the larger treatises and textbooks on general medicine, but to supplement them by giving, in a compact form, the essentials of the etiology, diagnosis and treatment of diseases in the field of internal medicine, for quick reference when time presses. It is considerably more complete and elaborate than the ordinary compend and should serve a useful purpose on the desk of the busy physician.

Conybeare: Diabetes

MANUAL OF DIABETES. *By J. J. Conybeare, M.C., M.D. Oxon., F.R.C.P., Physician to Guy's Hospital. Oxford University Press, London: Humphrey Milford. 1935. Price, $2.00.*

The successful treatment of diabetes requires strict attention to details, on the part of the physician, and intelligent cooperation, on the part of the patient.

This thin volume gives all the particulars of the recent advances which have been made in the treatment of this disease, so that the physician may have this material readily available between one pair of covers.

An appendix of about 25 pages gives the information which every diabetic patient should have, in order to take care of himself properly. This section may be purchased separately, at a very moderate cost, for distribution to patients.

The book-work is up to the usual Oxford high standard.

I like CLINICAL MEDICINE AND SURGERY better from month to month.—A. G. D., M.D., Ind.

Help For Writers

THE EDITOR'S HANDBOOK. *Fourth Edition, Revised and Enlarged. Mount Morris, Ill.: Kable Brothers Company. 1935. Price, $1.00.*

Originally intended as a private style manual for Kable Brothers Company, this compilation grew to a size which warranted its publication for general distribution. A great deal of information on current practice in spelling, abbreviation and capitalization, as well as the language of printing, is included in less than 100 pages. The arrangement by which one looks, not for a rule, but directly for the example, in its alphabetic position, as in a dictionary, is handy. The book will prove a valuable addition to the desk of anyone concerned with the preparation of manuscript, which classification should include every physician and his secretary.

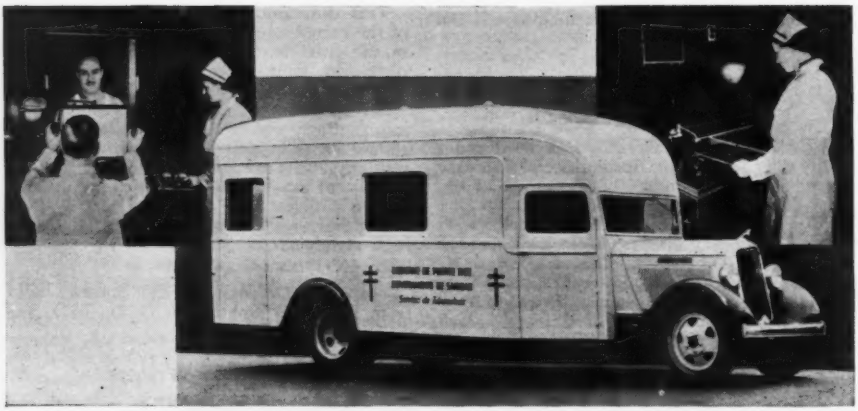
M. C. F.

Lichtwitz, Liesegang and Spiro: Colloids in Medicine

MEDIZINISCHE KOLLOIDLEHRE. *Lieferung 13, Seite 929-1008 und Lieferung 14, Seite 1009-1084. Herausgegeben von Prof. Dr. L. Lichtwitz, Dr. Raph. Ed. Liesegang, und Prof. Dr. Karl Spiro. Mit Vielen Abbildungen und 2 Farbigen Tafeln. Dresden und Leipzig: Verlag von Theodor Steinkopff. 1934. Price, RM. 5.—each.*

This important, serially-published textbook of colloid chemistry and its clinical application has run to fourteen sections, instead of the ten which were originally planned, and is now completed. There are 1,084 pages, including indexes of subjects and authors. It should be vastly helpful to research workers in chemistry and biology and in some phases of clinical medicine, if they read German.

MEDICAL NEWS



Courtesy, Chrysler Motors

X-Ray Clinic on Wheels

THIS is a 1½-ton Dodge truck, built for the use of the tuberculosis service of the health department of Porto Rico.

The interior equipment of the body includes a compartment containing the x-ray apparatus and a special cot on which the patient is placed while being photographed. The storage space for photographic plates and the developing and washing tanks are also in this space, which may be made light-proof by means of steel shutters. Electric power for the x-ray apparatus is furnished by a special generator driven from the transmission take-off. A motor-driven ventilating fan supplies fresh air to both sections of the clinic on wheels.

Bad Nauheim's Centennial

WITH an official Inauguration Ceremony, on July 1, 1935, Bad Nauheim will begin its Centennial Celebration. This ceremony will be preceded, on June 30, by a special festival performance of Beethoven's IXth Symphony. The Celebration itself, however, will include the entire season of 1935, from May to September, so that the summer months will be replete with special operatic and dramatic programs, as well as concerts by famous orchestras and singers, social and sporting events, a historic folk pageant, and finally, two art exhibitions: "Masterpieces of the XIXth Century" and an "Exhibition of the Work of Munich Artists."

Bad Nauheim, "The Heart Cure," is famous, not alone for the healing properties of its springs and the skill of its physicians, but also for its beautiful natural scenery and its soothing and restful atmosphere. It is an ideal place to spend such a vacation as many physicians (as well as some of their patients) badly need.

New Army Surgeon General

IN accordance with what seems to be an established policy, President Roosevelt refused to reappoint Major General Robert U. Patterson as Surgeon General of the Army, at the close of his four-year term in that office, and has named in his stead, Col. Charles R. Reynolds, a tried and efficient soldier, who will assume the rank of major general and the duties of his new office on June 1, 1935. We hope to be able, soon, to introduce General Reynolds to our readers more formally.

Dr. Thorek Decorated

DR. MAX THOREK, of Chicago, who formerly edited the *Seminar* in this Journal, has recently been decorated with the Cross of Chevalier of the Legion of Honor, of France, in recognition of his contributions to science and his humanitarian work.

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TO ASSIST doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, Waukegan, Ill., will gladly forward requests for such catalogs, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this journal as to reliability and adaptability for physician's use.

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H-636 Science's latest contribution to female sex hormone therapy — Progynon. Schering Corporation.

H-642 Ergoapiol (Smith) and Glykeron—(for sample, send narcotic registry number). Martin H. Smith Co.

H-669 The Illinois Post Graduate Medical School Bulletin. The Illinois Post Graduate Medical School, Inc.

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